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THE NATION IN ARMS

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THE NATION IN ARMS

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THE NATION IN ARMS

A TREATISE ON MODERN MILITARY SYSTEMS AND THE CONDUCT OF WAR

BY

BARON COLMAR VON DER GOLTZ

LIEUT.-GENERAL GERMAN ARMY

TRANSLATED BY

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NEW EDITION

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PREFACE TO THE FIRST EDITION

The finding of an appropriate title is often quite as difficult as the writing of a book.

It is not exactly tactics, nor strategy, nor a systematic exposition of the art of war which forms the subject of the following pages; and now that they lie before me in a complete form, I am verily at a loss as to what to call them. A title must, however, be found, which, while aptly indicating the scope, will not hold out a promise of more than can be performed.

Since my book deals with the affairs of the nation in arms, to whose sentiments it is intended to appeal, it shall be entitled accordingly—

"THE NATION IN ARMS:"

a poetical expression, as well as an apothegm worthy of a king, uttered in critical times.

"The Prussian Army will, in the future, also be the Prussian Nation in Arms."

Thus ran our King's pronouncement in the Speech from the Throne on the 12th January, 1860, which has subsequently been realized, has been hallowed in three great wars, and has become the keynote of the development of the armies of our own time. To the furtherance of the same object be the following reflections dedicated, and may they serve to kindle in all German hearts a true appreciation of the phrase, "A Nation in Arms."

THE AUTHOR

Friedenau, near Berlin
May 1883

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PREFACE TO THE FIFTH EDITION

The fourth edition of my book appeared in 1890, at the beginning of a period of great activity in all branches of the art of war. This movement has not yet subsided, but is still proceeding vigorously. Military science is at present undergoing revolutionary changes, which may influence the details of the military art, though, in essentials, it will probably remain unaffected while national armies of huge masses remain in existence. And since fundamental principles are immutable, it can never become more than a question of recognising the original in somewhat altered form.

To-day it is, nevertheless, still impossible to predict with any degree of assurance what the war of the future will bring forth. Fancy lacks the model on which to sketch its lines.

It is true, that the last decade produced three campaigns, but as regards fighting on land, not one of them approached in magnitude either the Franco-German or the last Russo-Turkish war. It was only the extreme significance of maritime strength in relation to world-power which was exemplified in a striking manner by the United States of North America, who, by one short and practically bloodless campaign, gained valuable colonial possessions after the destruction of two hostile fleets.

Speculations as to the political and historical importance of sea power, called up by the above momentous event, however alluring the subject, must be eschewed in this place, lest the proposed field of view be unduly expanded and the prescribed line be deviated from.

That, then, is the point of view adhered to in the fifth

edition, where it has been my endeavour to trace the latest developments in the range of military operations in conjunction with the older ones, and to determine their influence on martial events. Progress along such a course may be less dashing and rapid than by a surrender to the flight of fancy and a visionary forecast of coming events, but the prospect of safely reaching one's goal will certainly be much brighter.

THE AUTHOR

BERLIN, *December* 1898

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THE NATION IN ARMS

INTRODUCTION

A MILITARY author who, after Clausewitz, writes upon war, runs the risk of being likened to the poet who, after Goethe, attempts a Faust, or, after Shakespeare, a Hamlet. Everything of any importance to be said about the nature of war can be found stereotyped in the works left behind by that greatest of military thinkers. Although these works were left in a state of apparent incompleteness, and Clausewitz himself described his book "On War" as being "a still somewhat unshapen mass, requiring remodelling," this must be taken in the sense that he, too, was subject to the fate of all aspiring spirits, and was made to feel that all his achievements fell short of the ideal floating before his mind. For us, who cannot know that ideal, the result of his labours forms the most complete work of its kind. Hence I have not attempted to write anything new, or anything of universal applicability, about the art of war, but have restricted my attention to the military operations of our own time; in fact, this book has been written for the present only.

Although the leading principles of warfare are said to be eternal, yet the phenomena which have to be dealt and reckoned with are liable to continuous change. War, as an act of human intercourse, is, in its external form, subject to all the same changes which affect the latter. Railways and telegraphs, which show new ways to trade, have also opened hitherto closed paths to military science. Technical skill,

which supplied industry with improved machinery, has also placed into the soldier's hands new weapons, which enable him to produce effects never dreamt of by his forbears. Military precepts are thus continually changing in their application, and it may rightly be said, that every age has its own peculiar mode of warfare. Hence, the methods which, in 1870, led to triumph, cannot now be regarded as the absolute standard for the future; new conditions, ushered in by the present, compel us to devise fresh ways and means.

All the great Continental Powers have, during the last few years, made strenuous efforts to increase their fighting strength. There has either taken place, as in France and Russia, a complete reorganisation of the military system, or, as in Germany, Austria, and Italy, steps have been taken to develop the existing institutions so as to increase the forces available for the defence of the country to the utmost limit, and, more particularly, to provide greater numbers for employment in the field. Not a single State in Europe could afford to hold aloof from the general tendency.

Our last wars included five great battles, viz.: Königgrätz, Wörth, Vionville, St. Privat, and Sedan. Even what we beheld there, will be repeated in the future on a vastly greater scale. At Königgrätz almost the entire army present in the theatre of war where the final issue was decided was engaged in a single locality; at St. Privat rather more than one-half. Applying the same to present conditions, it will be seen that gigantic struggles between forces composed of from ten to fifteen army corps, under a single commander, will not be beyond the bounds of probability. Such are, however, proportions which have not yet been realised in modern times; and it is easily conceivable how greatly the questions of feeding and mobility will be affected, no less than the tactical leading.

Since the last war, France has supplied the first example of artificial preparation of a possible theatre of war, and is by no means any longer unique in that respect. Germany has witnessed the creation of practically one vast entrenched

camp on the eastern frontier of Poland and Lithuania. Austria, Italy, Switzerland, Belgium, and Roumania have methodically prepared the defence of their dominions by means of fortification, and the movement shows as yet no signs of arrest. In proportion as the material wealth of nations increases, the greater becomes their striving to ensure themselves against the fateful consequences of invasion, for which purposes increased opulence supplies ever growing financial means. Though we ourselves have reduced the number of our fortresses, those retained have been considerably extended and strengthened. With us, too, the idea is being entertained of establishing, by means of additional works, strategical connecting links between them, whereby the plans of the commander-in-chief would be facilitated in a greater measure than by the command of isolated points. Such radical changes cannot, however, proceed without a general effect on the conduct of war. The absolute necessity of a closer union between siege operations—hitherto regarded as a thing distinctly apart—and action in the open field and, furthermore, of making more general use of entrenchments in the latter phase of warfare, is now being universally recognised. New means to this end are forthcoming, such, for instance, as mobile quick-firing guns with shield protection, which facilitate the improvisation of positions not liable to seizure without a heavy struggle.

Even the assailant is strongly urged to carry the spade.

The growing application of artificial augmentation of strength on the battlefield has impelled the artillery either to revive the use of high-angle fire in the field, by bringing the field mortar or howitzer again on the scene, or to devise means of effective action against hostile bodies in covered positions by a modification in the bursting effect of projectiles.

Heavy artillery, as of old, again accompanies armies in the field, in order to be at hand where the power of field-guns proves inadequate to break down resistance.

Although all these new features be unfavourable to the

action of cavalry, its champions nevertheless cleave to the belief that, owing to higher efficiency of both man and horse, and new tactical methods, it is destined to play an even more active *rôle* on the battlefield of the future. Great masses of horsemen, consisting of several divisions, are now seen at manœuvres as in the days of Frederick the Great and of Napoleon. Practice in dismounted action and in surmounting formidable obstacles renders modern cavalry more free and independent in its ventures than formerly.

In reconnoitring cavalry has made most notable strides in advance. This service has met a new auxiliary in the captive balloon, and the conveyance of information has been greatly facilitated by the more extensive and improved application of field telegraphs, telephones, and carrier pigeons.

The *rôle* of railways in war, though already outside the category of *recent* new features, has been considerably expanded since 1870. The construction of field lines, then timorously essayed for the first time, is now the subject of preparation on a large scale. The provision of special troops for railway traffic management in war is now inevitable.

The principle which has found acceptance in the infantry, of fire control being exercised by officers in an even stricter manner than formerly, and in accordance with scientific principles—the dispersed order of fighting notwithstanding—has assumed special importance since the war with France, the object being to attain better results at a given point by the effective collective action of a large number of weapons.

The power of the individual weapon has, moreover, increased in an extraordinary degree, and ever since the Peace of Frankfort this advance has occupied a prominent place in military thought. The bulk of military literature of the last decades was devoted to questions arising from the enhanced power of infantry fire, the importance of which seems to have been overrated. The subject, though new at the beginning of the war of 1870, found a practical and definite solution in the course of that campaign. Towards the end of the cam-

paign the German armies had arrived at a true appreciation of the greater range and precision of the new weapons. Nevertheless, in consequence of the recollection of severe and distressing losses, the matter continued to occupy the almost exclusive attention of our military authorities, and the misfortune of the Russians before Plevna tended to impel them in the same direction. Since then the idea of a battle has been considerably modified by the universal introduction of rifles of small calibre and of smokeless powder, and the conflict of opinion rages anew.

The military mind being thus occupied, less attention has been paid to the influence of new phenomena upon military science as a whole. Apart from philosophical speculation, the subject of strategy has only recently again become the theme of exhaustive treatises, whose number remains, however, insignificant in comparison with literary efforts of a tactical nature.

Hence I crave indulgence for my attempt. Its principal aim is to recall to strategy the attention which hitherto has been diverted almost exclusively to generalship in battle.

To the professional soldier the chapters of my book will disclose only well-known matter, though even he may profit from a systematic arrangement of all the materials. The main object of the book is to create a sound conception of the nature of war outside military circles. A keen desire for instruction has already manifested itself, and *a true comprehension of the nature of war is certainly not the least important step in the direction of national military efficiency.*

The day will come when the present aspect of war will dissolve, when forms, customs, and opinions will again be altered. Looking forward into the future, we seem to feel the coming of a time when the armed millions of the present will have played out their part. A new Alexander will arise who, with a small body of well-equipped and skilled warriors, will drive the impotent hordes before him, when, in their eagerness to multiply, they shall have overstepped all proper

bounds. have lost internal cohesion, and, like the green-banner army of China, have become transformed into a numberless, but effete, host of Philistines.

In that hour everything written on the employment of armed masses will naturally become meaningless, but the contingency is still very remote. As yet the development of national armies is still in full swing, and the supposition of the continuance of this state of affairs forms the basis of the following reflections. It does not behove the ordinary mortal in the midst of the activity of everyday life to peer too deeply into the future, lest he incur the risk of depriving his work of value for the present, while straining every nerve to make it outlive his times.

I should also state that a Central-European country is assumed as the theatre of war throughout. A war in the steppes of Asia, or in the tropical regions of Africa, assumes a different form than war in Germany, France, Italy, &c. Only what affects our own interests demands our attention.

I consider myself free from the obligation of beginning with general definitions which, as a rule, take up considerable space in military works. A treatise like the present one is usually wont to define what war means, and what strategy, tactics, &c., are, or, to use purely German phrase, what pertains to "Kriegskunde" and "Gefechtskunde" respectively. Authors frequently add new terms to the old in order to express their individual ideas, and, possibly, to gain for themselves a reputation of wisdom, though there is but little utility in such methods. Were I, for instance, to quote here from my pocket dictionary, "War is the bloody conflict of two nations or political parties, of which the one wishes to impose its will upon the other, while the other refuses to submit," no one would learn anything particularly new. All such terms shall therefore be assumed to be already familiar, or such as would require special explanation shall be avoided. In war we are concerned with the simplest things—men, horses, weapons, roads, &c.—hence it is possible to treat of war in the simplest language, and explain everything necessary without verbal

gymnastics. Schopenhauer's admonition, "German authors, one and all, would do well to realise that, wherever possible, they ought to think like a great genius, while speaking the language of the majority," is equally applicable to military writers.

* * * *

In conclusion, it appears to me unnecessary to logically deduce everything said *ab ovo*. This generally leads to nothing but a long process of distillation, only to result in the end in something quite self-evident. I thus dispense with all mental gymnastics, preferring to follow events as war produces them in diversified sequence. Even though they be internally connected, it is frequently impossible to demonstrate this connection.

SECTION I

THE ARMIES OF THE PRESENT

1. *Vindication of Modern National Armies.*

We frequently hear the complaint that all advances made by modern science and technical art are immediately applied to the abominable end of annihilating mankind. Instead, so it would appear, of nations rising by such advances ever higher and higher in civilisation, they thus become only ruder and more brutal, since they brood on mutual destruction with ever-growing zeal. But this assertion is only seemingly correct. The nobler and grander the life of a nation has become by culture, science, art, and wealth, the more it has to lose by war; and it will, consequently, be more careful to equip itself thoroughly for battle. We must not adduce, as a counter-proof, decaying civilised nations which, though their position in other respects were brilliant, have proved their ineptitude for war. The internal decay of their whole political and social life, though latent, was nevertheless a reality. Perchance it was only intelligence still standing at a lofty height, whilst virtue was lost and gone. Luxury and pomp had long since supplanted sense of duty, self-sacrifice, and public spirit; and thus the power of action was wanting. As a rule, high culture and military power go hand-in-hand, as evidenced in the cases of Greece and Rome. Again, we must not advance exceptions like England, whose military system is out of all proportion to the development of the State in other respects. Protected by the sea, and with all its interests bound up with the sea, it has only colonial wars to wage, in which money

plays the chief part. This latter is the sharpest weapon in England's hand. In addition to this, it maintains a fleet such as no other Empire can boast. But, in spite of all the advantages of its position, it will soon find itself compelled to follow the lead of the times, and to strengthen the organisation of its army, or it will gradually sink both in power and in its influence upon the Continent. Within the last few years some of the most prominent public men in England have raised their voices against undue confidence in the old military institutions of the country.

It is, however, perfectly natural that the great civilised nations of the present should bring their military organisation to ever greater perfection. The day of Cabinet wars is over. It is no longer the weakness of a single man, at the head of affairs, or of a dominant party, that is decisive, but only the exhaustion of the belligerent nations. The French people assert, even to-day, that they did not desire the war of 1870. But, when the Empire which declared this war fell, the same nation was at once ready to carry it on to the bitter end. The man who, in 1870, had been most earnest in his warnings against a rash declaration of war, in September headed the nation, and took upon himself the leadership of the armies, only to become the most zealous fomenter of the bloody struggle. Wars have become solely the concern of the nations engaged. One even personally averse to warlike enterprise feels it a duty incumbent upon him to devote himself entirely to them so soon as the victory or the defeat of his country is at stake. Even international socialistic machination has failed, either to disturb this condition to an appreciable extent, or to banish national sentiment from the life of the people. A clashing of interests leads to war, but the passions of the nations decide, independently of these, up to what point the war shall be carried. War, now as before, aids policy in the attainment of its objects ; yet, if only for the sake of subordinate interests it must aim at the complete subjection of the enemy. This necessarily entails the decisive use of all means,

intellectual and material alike, tending to subdue the foe; and it is, consequently, right and equitable in time of peace to prepare all available resources with a view to the whole being in a state of readiness for war whenever the occasion arises.

If, from humanitarian principles, a nation decided not to resort to extremities, but to employ its strength up to a given point only, it would soon find itself swept onward against its will. No enemy would consider himself bound to observe a similar limitation. So far from this being the case, each would immediately avail himself of the voluntary moderation of the other to outstrip him at once in activity.

"Philanthropists may think it possible that the disarmament or subjection of the enemy can be effected by some artificial means, without causing too many wounds, and that this is the true aim of all military science. Pretty as that looks," says Clausewitz, "we must refute this error, for, in such dangerous matters as war, errors arising from good-nature are the worst of all. As the employment of physical force to its fullest extent in no wise excludes the co-operation of intelligence, it follows, that he who makes use of this force ruthlessly, and without sparing blood, must obtain an ascendancy, if the enemy does not do likewise. By so doing, he frames a law for the other, and thus both strain every nerve, without finding any other limitation but their own natural counterpoise."

The matter thus lies in a nutshell. The fact that the sacrifices, which nations are called upon to make for the development of their military systems, lie as a heavy burden upon the shoulders of the living generation, cannot alter the case in the least. That nation which first began to retrograde in this respect would at once lose its position, its power, and its voice. It would have to bear the cost of every casual friction, and, taught by bitter experience, would very soon prefer to begin to arm like others, in order to make up for lost time. All projects of disarmament are framed in misconception of our present political life, which proceeds from the tribal consanguinity of nations. Owing to the community of

interests, which to-day prevails in every nation, the various peoples confront each other like persons among whom a natural inherent selfishness becomes the source of disputes, individual goodwill notwithstanding. National egotism is inseparable from our ideas of national greatness. This egotism will always appeal to arms when other means fail, and where would a tribunal of arbitration be found which were capable of dictating peace? Only a world-empire could do this. But world-empires owe their being to, and are inseparable from, wars.

The mutual mistrust between nations even makes all proposals of disarmament exceedingly suspicious. The first was made in the winter of 1800–1801 by Bonaparte, then First Consul, to the ambassadors of Austria and Prussia. "The Court of Vienna certainly desires nothing better, but the difficulty consists in persuading the Court of Berlin to accede to it," was the shrewd Austrian reply. Upon this same standpoint the matter will ever rest. Each Power is bound to demand that the other take the initiative, and, owing to apprehensions entertained of others, none will be willing to take it; on the contrary, each will keep its swords sharp. Only that nation is secure which is prepared at any moment to defend its independence sword in hand.

We must certainly reflect that great military expenditure may cause gradual exhaustion, which will sap the martial strength and efficiency of the nation. The enigma to be solved in the present state of affairs is how to produce a complete fusion of the military and the social and industrial life of the people, so that the former may impede the latter as little as possible, and that, on the other hand, the full wealth of the resources of the latter may be evidenced by the healthy condition of the former. Universal military service has taken the most important step in this direction, for, since its introduction, those with the colours are no longer permanently, but only temporarily, withdrawn from work, while every healthy man is available for service.

The sacrifices entailed by this institution have increased in

a manner that was formerly held to be impossible. Yet this circumstance also should be regarded in the right light. Compared with the older system, the present is actually less onerous. If a great Continental Power in these days wished to raise in the old fashion, viz. by enlistment, an army strong enough to play a great part, the military estimates would run into enormous figures.

But, as the fusion of the military system with the national and political life leads, when *compared with results*, to a diminution of the sacrifices demanded, so, despite all appearances, war becomes more humane by taking advantage of the progress of civilisation. The foe is conquered, not by the destruction of his existence, but by the annihilation of his hopes of victory.

"Fighting to the last man," as we may add to soothe timid minds, is only a strong figure of speech expressing a determination to fight bravely. It would sound strange if an army were to vow, before battle, to fight until it had lost twenty per cent.; and yet this would be more, and much more, than sufficient. As a rule, a loss of half this proportion on either side is sufficient to decide the victory. The destruction of a part of the whole deters the rest from further exertions, and ends the struggle. The more startling and intense the effects of the weapons, the sooner do they produce a deterrent effect, and thus it comes to pass that battles generally are less bloody in proportion as the engines of destruction have attained greater perfection.

A single modern shrapnel slays at one blow ten or twenty men, and produces a moral effect such as formerly was not, perhaps, attained till double the number had been swept down by round shot. The effect of the fire of small arms has been similarly increased. We may compute it at fifty to one hundred times that of the days when the Swedish musketeers boasted of their superiority over the Imperial troops, because they only required twelve, whilst the latter took fifteen, minutes to load their flint-locks.

Individual scenes enacted in battle are far more horrible

than formerly. But, to make amends, they produce a much greater moral impression, which, again, tends to make the whole struggle less bloody. In spite of all military energy displayed and the enhanced effect of the weapons of war, no battle of modern times has produced such carnage as did those of Eylau or Borodino. But most bloody of all were the battles of ancient times, in which the attack was made with a club or the short Roman sword.

The fact that each new invention and each mechanical improvement seems somehow, in these days, to find its way into military service need not, therefore, alarm us, much less be regarded as a step backward in humanity and civilisation. By these means, on the contrary, the battle is only the more rapidly decided and the war brought to an end sooner than in the days of old ; and that is certainly an end to be desired, since war, in these modern times, by displaying itself in its natural and violent form, convulses all creation, and makes it quake to its foundations.

2. *Dependence of Warfare and Military Organisation upon the General State of Civilisation.*

Historical.

Accustomed as we are to the phenomena of the present, viz., huge armies and ruthless employment of force, we might almost believe that war and military institutions had worn these natural features from time immemorial. Yet both were always much dependent upon the state of universal civilisation, yes, even upon theories, upon the views of right and wrong, and the prejudices of the times. The simple conception of military operations which obtains to-day, namely, that war, where necessary, revokes all rights incidental to a state of peace, did not obtain in former generations; and the application of force was bound up with certain forms, scarcely ever departed from, even under pretext of dire necessity.

There was a time when the troops camped in the corn-fields and yet starved, when markets were held in the camps, as in peace time, and when the soldier purchased his own meat and vegetables, whilst the administration of the army made the greatest exertions to provide him with bread as punctually as with money. Höffner relates how, in the year 1806, the troops of the Prussian main army camped, on the night of the 11th and 12th October, close to huge piles of felled wood, and perished with cold, and, even on the following day, remained without fire-wood to cook their food, and that it was only decided to seize those supplies for the army after the soldiers had commenced to help themselves and were felling trees in the neighbourhood. And the same writer further tells us, how in those critical days the supply of oats for the horses ran out entirely, whilst abundant supplies of it were stored in the "Rathskammer" at Jena. But although the French were approaching, the generalissimo of the army considered himself obliged to write first to the Supreme Ducal Administration at Weimar for leave to purchase what was necessary. What the answer was, we do not know; but this we do know, that the oats fell into the enemy's hands, and that the French horses undertook to solve the complicated question. And yet the Ducal Commissary at Weimar was no ordinary man, certainly no pedant, being none other than the Privy Councillor and Minister of State, Von Goethe, "a tall handsome man"—as he is described by a contemporary—"who, in his embroidered Court dress, well powdered, and with a hair-knot and dress-sword, always bore himself as the Minister, and well represented the dignity appertaining to his rank."*

Still greater curiosities of the same times have been recorded by Clausewitz. When the Prussian troops, after the battle of Auerstädt, were two whole days without any provisions, and on the third day arrived perfectly famished in a rich village, Prince Augustus of Prussia acted as is customary now in every war, and allowed provisions to be requisitioned for

* *Cf.* "Marwitz Nachlass," vol. ii. p. 11. Berlin, 1852.

his grenadiers, who were nearly dead from exhaustion. The peasants raised a great uproar at the iniquity of the proceeding, and immediately an old staff officer of the Guards appeared on the scene, quite indignant at such conduct, and made the strongest representations upon the subject to the Prince, to the effect that such a system of robbery was quite *unknown in the Prussian army, and repugnant to its spirit.*

On this account, General Kalkreuth, who was the temporary commander, had on the previous evening issued the order, "Bread shall be served out to the troops, and, if no bread is there, bread-money shall be given them." Now, bread-wagons were out of the question, as was also money; and Prince Augustus accordingly quite rightly remarked that it simply amounted to "give the soldiers money that you have not, to buy bread where there is none to be had." Plenty of similar anecdotes could be told of the military customs of those times; stories that would to-day be held to be almost incredible, but which no one in those days marvelled at.

If things of this sort could happen, even after the world had already experienced a series of Napoleonic campaigns, the peculiar views then held must have been due partly to practically important motives, and partly to such as had become honoured in the observance.

These motives are not far to seek. First of all must be mentioned the recruiting system, which, combined with the old feudal levies, was, until the French Revolution, the best means of raising an army. The recruiting system brought the soldier and his sovereign and military chief into, so to say, the relationship of parties to a contract. As the former owed obedience, so the latter was bound to give promptly what he had promised. Thus arose that peculiar system of supply magazines which almost by itself gave to the military body of the last century its red-tapeism. It confined the movements of the armies within narrow limits, and tied them to magazines, bakeries, and a cumbrous train. Only a certain number of days' marches could be made forward in the same

direction, as at each further step in advance the artificial web behind the army became rent, and the transport of flour and bread between the magazines and the front could no longer be kept up under the hard and fast system of regulations. At the least, a delay was caused until new supplies were brought up, and new magazines constructed or established. These considerations hung upon the will of the commander like a leaden weight. Even though a genius of the first rank, like Frederick, occasionally freed himself from them, yet the majority of the commanders adhered strictly to them. At that time this system served best to ensure punctuality in provisioning the armies, and this was, after all, the chief point if recruiting was to flourish, and if discipline and order were to be maintained among the troops.

Each soldier represented a certain capital value which the head of the nation had to supply from the war-chest, that is—according to the notions of those times—from his own treasury. Thus arose pedantic calculations of money and men, such as are unknown to our military system. Besides, part of the army was composed of foreigners collected from all countries. National sentiment was not yet the universal bond of union, though, in a measure, it was replaced by loyalty to the hereditary sovereign. The troops were accordingly kept carefully together. Whole armies marched in unbroken compact masses and bivouacked in painfully exact order. Only thus was it possible to exercise strict surveillance over them, to prevent desertions and, at the same time, to provision them from the field-bakeries, and to hold markets.

Such a force, raised at so great an expense, was set in motion and employed at the sole beck of its commander-in-chief. The system of line tactics—designed with the object of bringing every man of the widely deployed lines, moving at the parade march, into action and every available weapon into the firing line—was in close conformity with prevailing conditions. Only with such tactics was it possible in battle to keep the mercenary soldiery under the watchful eyes of its

officers. A chain of peculiar circumstances thus prescribed the rules of the military operations of those times, and it was almost impossible to effect the slightest change without overthrowing the entire fabric.

We must not under-estimate the force of the theories produced by conditions such as these, which circumstances imposed upon military operations. False doctrines have before now led armies to destruction and brought States to ruin.

The weakness of the Allies in the wars of the coalition was, in great measure, due to the rigid views which, in the period following the Seven Years' War, prevailed among learned strategists always eager to act, as far as possible, in strict accordance with the science and art of the profession. Thence arose the deplorable disintegration of the combative forces, the prolixity of plans of operation, the exaggerated importance attached to fortresses and to the geography and the topographical features of a country, even to the geometrical conditions to be observed in projects of movements; in short, the frightful complication which rendered every undertaking as slow and as difficult as possible. Hence, also, that dangerous notion, which conceived the essentials of war to lie in the execution of cleverly devised manœuvres, rather than in the annihilation of the enemy's forces. This accounts for the frequent purposeless expeditions, the formation of intermediate and flanking corps, and of long chains of small detachments, the demonstrations and feints, all so characteristic of those times.

This, for instance, explains why in the year 1805, whilst the decisive issue lay in Moravia, the Prussian army advanced in full strength into Franconia, on the upper Main, more than 230 miles away, in order to compel Napoleon to retreat across the Rhine, "by the magic power of manœuvre." And this may also have been the reason why, shortly before the battle of Austerlitz, two battalions and 100 cavalry marched from Glatz to the frontier, at the urgent request of Russia, in order by this threat to exert pressure upon the main

French army. Heaven knows whether then, or even down to the present, a single Frenchman ever heard anything of the threat designed to check his Emperor's triumphant march.

To the same cause are also attributable the mistakes of 1806. It was the sickly-artificial conception of war, and not the inefficiency of the Prussian army, which led to the disaster. The hesitation of the Allies to cross the Rhine at the beginning of the campaign of 1814, and the movement of the Bohemian army towards the plateau of Langres, betrays the lingering remains of the old military doctrinaire school. This school achieved its crowning triumph when Massenbach, on his retreat from Jena and Auerstädt, ordered Prince Hohenlohe, who was in Rathenow, not to march upon the Oder, but to make a détour to the north, in order to place a brook between him and the enemy; and this though the enemy was not there, and the brook so dry that it formed no obstacle. The defeat of the army at Prenzlau was the consequence; but Massenbach had descried in the direct march between the brook and the enemy a strategical enormity, and it was quite in harmony with the spirit of the times to disregard all the means of safety, rather than to be guilty of such deadly sin against the rules of military science.

In the most critical moments of decisive wars inveterate theories as well as tradition and usage have asserted themselves, without the parties interested being really conscious of the fact.

The shrewdest heads showed themselves lying under the ban of the past. The more intellectual and illustrious the men who introduce and defend perverse theories, the more pernicious will be their effect. The military world invariably laid itself liable to such aberrations whenever it departed from a straightforward and simple conception of the rules of war, and distorted matter of fact, whilst ignoring the natural meaning of things and the influence of the human heart upon deliberation and action.

Prophetic were the words which Scharnhorst wrote shortly

before Prussia's great catastrophe: "We have begun to value the arts of war higher than military virtues; and that has been the ruin of nations from time immemorial."

Warmth of feeling and a certain enthusiasm, whether it be bestowed upon the idealistic fulfilment of duty, upon honour and glory, love of a great man, or upon attachment to the Fatherland, both these are inseparable from success in war. They also prevent those errors into which a race can only fall through the loss of the habit of the simple use of its intellectual faculties, combined with the forfeiture of its good moral qualities.

That was the case in those times. The shallowness of that period of enlightenment permitted of no deep feeling. Only an event that shook all established principles, as an earthquake shakes the foundations of the earth, was able to thoroughly clear away the pettiness, the prejudices, the customs, and the learned pedantry of the preceding century, and bring about a complete revulsion.

This event was the French Revolution. It marks the commencement of the present era of the conduct of war, which will endure until new and universal social changes shall produce other bases of both political life and military institutions. The French Revolution annihilated at a single blow the scrupulous hesitation to make war to feed war, to annul civil rights at the first roar of the cannon, and to live on the country in which the campaign takes place.

Conscription has furnished men in sufficient numbers to allow of their being lavishly sacrificed in case of emergency. The modern financial and commercial systems have facilitated the flotation of loans by subscription, and, instead of only the small state treasury, the credit of the whole country became available for the purposes of war. Thus war became more unfettered, and the general was freed from all anxiety with regard to bread and funds. Strategy and tactics assumed a more vigorous and pronounced character. The living on the enemy's country obliged the armies to spread out sufficiently, and to divide their forces, thus giving the several divisions

greater liberty of action. The recruiting system disappeared, and with it the fear of desertion. The division and separation of the masses of fighting men was henceforth fraught with no danger. But, in order to provide against failure of concentration at the critical moment, advance guards and detachments of cavalry were sent in advance of the columns.

For "line tactics," moreover, well-drilled troops were an absolute necessity. These rapidly disappeared, owing to the enormous sacrifice of men during the period of the Revolution, and conscription could only supply soldiers of less perfect training. The "line" accordingly died out, and the column took its place. This, in consequence of its dense formation, would soon have been destroyed by the fire, had it not been possible to protect it in some measure by skirmishers. Columns and skirmishers fought henceforth in intimate connection. Both naturally showed themselves much more pliable than the rigid lines with their parade-like form of advance. The latter relied essentially upon open country, but now this limitation has also disappeared. All forms of ground were occupied by combatants, and full advantage was taken of the conformation of terrain. In this manner, not only all the forces at the disposal of a nation, as also all the resources of the scene of hostilities, were entirely available for the pursuit of a war, but battles could be fought wherever circumstances demanded it. The French Revolution restored to war that originality and simplicity which, together with its whole nature, it had forfeited in the days of the pigtail, in order to make room for a hybrid composed partly of vanity and partly of intellectual poverty.

Frederick the Great proved to the world what great things could be achieved with the restricted and artificial resources of older times. Napoleon, standing at the commencement of a new period, taught immediately what war in its unfettered form could accomplish. Upon his principles our modern ideas are still mainly based. He recalled to the mind of the world what the great Prussian King had already taught it, but which had been forgotten again, namely, that in war

everything depends upon the destruction of the enemy's army, and that the battle is the sole arbiter.

Prussia outstripped conscription, which was always attended with varying degrees of hardships, but invariably pressed heavily upon the lower classes, by a system of universal service, the leading idea being to distribute the military burden equally among all classes. This universal service called into being the systematic training of the people for military service.

Railways, which were unknown in Napoleonic times, provide for the most rapid collection of the belligerent forces. They dispense with the preliminary stages which preceded the wars of former days, but make in return the preparation for war in times of peace, and the transition to a war footing—mobilisation—when compared with former times, an act of the highest importance. The effect of the modern fire-arms is to drive the columns of the Napoleonic age out of the field; but their mobility has been transferred to a succession of lines which can accommodate themselves to any ground. The new weapons require, moreover, a good training of the rifleman, upon whom far greater demands are made than formerly.

This is the way in which we have succeeded in raising armies from the whole manhood of the nation; training them, in times of peace, in the best manner for war; furnishing them with all the resources that intelligence, wealth, and commerce can provide; and giving them an organisation which allows of transition from a state of peace to that of war in the shortest possible time. Upon the existence of such armies and upon the principle of employing them unreservedly for the purposes of war, the phenomena of modern warfare are founded.

Military organisation is not less dependent, and is intimately bound up with the state of culture which a nation has attained.

According to an illustrious writer of olden times, the Hanoverian Friedrich von der Decken, a friend and colleague

of Scharnhorst, the manner in which nations live decides the nature of this organisation. Only in the case of barbaric hordes without any fixed place of residence the whole people —old men, women, and children included—take part in the struggle, their whole mode of life being warlike. They also lack safe places in which to hide the weak and defenceless; in the case of a defeat, every one falls a victim to death, and hence no one withdraws from the duty of defending his race.

Where a people has adopted fixed domiciles, and assured its internal relations, it may still have to pass through a period in which, for the sake of existence or self-preservation, it becomes involved in constant war with its neighbours. That is the time in which all men capable of bearing arms voluntarily take part in the war. Man and soldier are convertible terms. The heroic age of every nation falls in this period of its development.

If the existence of a nation is externally secured, culture makes rapid strides, and gain and property begin to play a greater part than the desire for war. "The love of rest and enjoyment spreads rapidly like an infectious disease." The defence of the country is left to a portion of the population, which, in return for its services, enjoys special advantages or honours. A rapid improvement in arms takes place, because, on the one hand the nation becomes conscious of the beginning of weakness, and, on the other, of the worth of its existence. This is the period of the voluntary militia and of feudal systems.

Generally, as further progress is made, external circumstances give the first impulse to the formation of standing armies. So soon as Augustus decided on a permanent guard for the frontiers of the Roman Empire, the Roman army ceased to be a militia, and assumed the character of a standing army. The modern armies of this kind owe their origin to the rise of absolute sovereigns upon the ruins of the old feudal system.

Again, standing armies may vary according to the nature

of their constitution. Decken declared that system to be the most perfect in which one part was raised by recruiting, and the other by soldiers furnished by the country. It was still possible to write thus in the year 1800, in which the author's book was published in Hanover. The old Prussian cantonal constitution was before his eyes, a real work of art, and regarded in those days as a model. It proves, at the same time, the great dependence of the military institutions upon the peculiar relations of political life; therefore let us here devote a few words to it.

If Prussia was ever to rival the House of Hapsburg, and to retain independence in the German Empire, it was before all else necessary to have a large army. But such, drawn from a poor and, as yet, sparsely-populated country, would have taken too many hands from the tillage of the soil, and a rapid exhaustion would have ensued. That led to the idea of combining recruiting with a well-organised national militia. The nucleus of the army was formed of recruited soldiers, raised by recruiters in all countries. All served for life, they were always kept together, and they formed the real standing army. Such were soldiers by profession and veterans, well-fitted to be the instructors and guides of the young recruits furnished by the country. The "White" Grenadiers, particularly, were highly esteemed. Having become unfitted for military service, they settled in the country and increased the population, and even while still in the ranks, they generally plied a trade in addition to the profession of arms. The "cadres" thus formed were brought up to a considerable war strength by the native contingent. The last-named for their first training served only a single year in time of peace, in later times even only three months, and were subsequently called out annually for drill for a period of from four to six weeks. Each regiment was raised from a certain canton, and the levy was made in as regular and lawful a manner as in our times. Those selected enjoyed, as against their manorial lord and his officials, many advantages, and their lot was not nearly so bad as it has been the fashion in

later times to describe it. Since they were always at work at home for eleven months of the year, their actual time of service, including subsequent musters, was at most one year and three-quarters,* although they remained soldiers for twenty successive years. These countrymen thus formed nothing more nor less than a local militia, but which, nevertheless, blended with old soldiers, passed creditably through the ordeal of the Seven Years' War. Only in this way was it possible for the small country to support a military force numbering hundreds of thousands and able to cope successfully with the hosts of three great Powers ; and by this means alone was Frederick the Great enabled to carry out his policy.

A chain of circumstances, ranging from the position of the humble peasant up to the high policy of the king, produced the masterly military organisation, which was exactly suited to the times of Frederick, but which, to the misfortune of the State, was still retained, even when the reason for its existence had disappeared and requirements had entirely altered. We have since then proceeded a step further in the development of standing armies. Friedrich von der Decken's saying is no longer valid, the blending of recruiting with levying is not only unnecessary, but according to our views even objectionable, because common affection to the one Fatherland and the feeling that the service of arms is an honourable and natural duty, and not mere labour for money, must create the proper bond of union in armies.

We no longer require aliens, because the country has sons of its own in sufficient numbers for both army and labour, and we can dispense with mercenaries, because we can fill up our " cadres " from those who gather under our colours. The military system of our country, based as it is upon the universal service of its sons, is in harmony with our conception of the modern state, as being a union which accords to each of those belonging to it the same protection and the same

* We must here point out how false it is to quote the disaster of Jena and Auerstädt as an historical instance speaking against long-service armies. Precisely the opposite is the case

advantages, but which, on the other hand, also claims the right of imposing similar burdens upon each. Our system is essentially an ideal military organisation for a civilised people. Only in its practical application, in which many other subordinate considerations are involved, it still remains slightly behind.* But military organisations do not entirely depend upon social conditions. Geographical ones as in England, and political ones as in North America, play a great part, and the matter is accordingly an international question. The military systems of our neighbours partially influence our own, and imitation, too, has occasionally exercised remarkable influence.

Thus military systems and methods of warfare alike wear an ever-changing face. They require change, and experience teaches that reorganisations taken at the right time possess a reviving and strengthening influence. Napoleon's saying that tactics ought to be altered every ten years, may rightly be supplemented by saying that this must also periodically be the case with military organisation; only both must be carefully kept in harmony with the general conditions of the nations, if they are to survive. *Every good military system bears a clearly defined national character.*

3. *The Elements composing an Army.*

Our present military system, which is similar to that of all other great European Powers, excepting England, has the advantage of providing an army uniform in all its elements. It supplies young soldiers for the "field" army,† and in this arrangement there is much wisdom. In everything apper-

* Since the introduction of two years' colour service in the dismounted branches by the law of August 3, 1893, Germany has arrived, as nearly as the circumstances of the time permit, at the desired object—to take into the ranks every man liable to serve in the army.

† The annual contingents actually with the colours, who, by virtue of continuous training under professional officers, are the most efficient troops, are made up to war strength from the previously dismissed contingents, *i.e.*, the next higher in age.

taining to military matters, the peculiarities of human nature must be consulted. The "field" army is exposed to the severest losses, and the prospect of dying for the Fatherland comes nearer home to each one of its members than to those of other parts of the army. The "field" army fights the battles, and it is the "field" army that has to face the stress and the terrors of war in their most serious aspect. All this the young soldier endures, in spite of all assertions to the contrary, more cheerfully and better than the older soldier, although the former may lack the bodily strength of the latter.

It is only the young that depart from life without pangs. They are not as yet fettered to this earth by the thousand threads that civil life weaves round us. They have not as yet learnt to be sparing of the hours of life. The enigma which they are curious to solve still lies before them as a closed book. They mount the hill without perceiving the abruptness of the precipice on the other side. Their love of adventure rouses their eagerness for battle. Rest and enjoyment, the aim and aspiration of riper years, are as yet far removed. They advance into battle with joy and light-heartedness, two very necessary qualities for the bloody work before them.

The strength of a nation lies in its youth.

Our military system keeps the soldier in the field army until about his thirtieth year. Older writers have recommended the time from the eighteenth to the twenty-fourth year as the best for military service. The body is then quite vigorous enough to endure hardships, and the soldier is as yet free and unfettered. The grain of heedlessness, a quality peculiar to the freshness of youth, is an excellent incentive to martial achievement.

A young field army, particularly one uniformly young, is greatly superior to any other. An army like the old Prussian, in which a youth of fourteen summers, native soldiers of twenty and thirty years of age, grey-haired foreigners of sixty to seventy years, stood shoulder to shoulder in the ranks, could not possibly possess the same internal

cohesion. The employment on active service of aged men will only bear good fruit in exceptional cases, where peril to hearth, home, and family has become dangerously near, and defence is a duty incumbent upon all. Older men, again, on completion of their colour service, have become absorbed in their civil avocations, and, when summoned again to the standard at the outbreak of war, will be found to be entire strangers to a soldier's life. They have, in many cases, experienced the cark and care of life, and often have to leave their home affairs in a disordered condition. All this in no wise enhances their inclination to face death for the Fatherland.

Experience in the short wars of our day plays but an insignificant *rôle* in regard to the private soldier, as, properly speaking, it merely supplies a knowledge of the practical needs of life in the field. Our ideas of the value of veterans date from the time of "professional" armies pure and simple, or from the days of such as had become professional by constant wars. Soldiers then formed a caste apart; the regiment was their home, they became adventurers, and fighting was the sole aim and object of their existence. It is conceivable under such conditions that seasoned soldiers should become veritable virtuosos in the art of war; but, however capable of great achievements, such a stage can now no longer be attained, and our military system rightly excludes old soldiers from the field army.

Upon courage experience may often work in even an injurious manner. Those who have not yet realised danger are generally the bravest soldiers.*

It is otherwise with leaders than with soldiers. The former may not be taken unawares and confounded by the novelty of the phenomena of war. In their case experience is of genuine value, and such experience can only partially be replaced by a study of military history.

* An exception may be made in the case of primitive races, whose lives are spent in a series of struggles with neighbouring tribes; but such may fitly be disregarded here, since we are solely concerned with the affairs of Western civilisation.

Veteran generals and officers, now as formerly, maintain their position of honour.

Up to what age the State may demand military service, depends upon the force of circumstances, the measures of competing neighbours, and the degree of danger existing. By enactments passed in times of peace, civilised nations rarely go beyond the forty-fifth year of age. But an hour of peril justifies exceptional laws, and the old mercenary armies have proved that many men remain efficient in the ranks for five and even ten years longer.

The military system of our day greatly diversifies the nature of services to be rendered and their demands on the physical strength and bodily activity of individuals.

The contingents next in age to those of the active army will invariably be formed into units designed to reinforce the field troops, hence on the outbreak of hostilities will proceed with the latter to the frontier and take part in all operations in the open field, in skirmish, and in battle. The more serious the situation, the more strenuous the exertions of the parties to the strife, to the greater extent will these contingents be absorbed in their *rôle*, which, moreover, becomes more exacting as the war is protracted and becomes more stubborn in nature.

This class of troops, of which "cadres" are not, as a rule, formed in times of peace, is also, so far as any remain available, employed in the duty of guarding the railways and roads, and in the occupation of districts in the rear of the army which has invaded the enemy's country. Here the duties of active and garrison troops are combined. Numerous fortresses, open towns, railway stations, depôts, hospitals, magazines, bridges, intersections of roads, &c., must be held, in order that communication may be kept open. The endless train of vehicles, of convoys of sick, wounded, and convalescent soldiers, prisoners of war, *matériel* of all sorts, and of horses and cattle, always going on in the rear of a great army, demand an extensive escort-service. The territory occupied must be administered by force, and this cannot, as a rule, be

done without military assistance. Attempts on the lines of communication, the assembly of armed bands, and a rebellious disposition on the part of the population, must be prevented or suppressed. Guard duty varies with patrolling, which frequently leads to skirmishes, and a round of exhausting activity is entailed, which only differs from that of the field army by the absence of great engagements and the considerable losses of a pitched battle, and, so long as the war is carried on in a civilised country, by the fact that the necessity of bivouacking is less frequent.

In sieges, too, reserve troops are fitly employed, because the duty here, though hard, is regular, and demands no great mobility and tactical skill. They will naturally be employed on all operations of minor importance, for which the field army authorities are loth to detach troops, in order that their main object, namely, the annihilation of the enemy's field army, be not unduly interfered with.

Still less mobility, vigour, and freshness is demanded for garrison duty in the fortresses at home. Even when the enemy invades the country, only part of the fortresses will be threatened and only a few really besieged. In most cases a detail of active or reserve troops will be available to take part in the fighting and to lighten the task of the "Landwehr" forming the garrison troops. Oftentimes great and important towns or certain districts of the country must be occupied for merely the maintenance of order, and only transport and guard duty on the railways falls to the garrison troops: for such duties the older elements, no longer quite fit for active field service, can, of course, be incorporated with advantage.

There are also a number of duties which can perfectly well be discharged even by partly trained troops, such as the guarding of prisoners and prisons, and the guard and signalling duties on unfortified coasts, on rivers, and in mountains. And, again, the administrative services of the army require many labourers and artisans at home, and the hospital service, too, claims many hands.

Thus even men of advanced age can be usefully employed,

and men who have not even in peace served under arms may be called out, in order that all, in the performance of various duties for the army, may pay their tribute to their Fatherland.

For that reason all great Powers supplement their armies proper by legal enactments providing for a levy *en masse* of all men fit for military duty. We possess such a supplemental force in our "Landsturm," whose *rôle* is even more than usually comprehensive, since its first ban is designed to act as a feeder to the army in case of necessity.

Quite independent of these latter are the *depôt troops*, whose duty consists in training and preparing fresh drafts for the army in the field. How important this duty is, was seen in 1870, when the drafts for the German army sent to the front to make good casualties of all kinds consisted of 2,000 officers and 220,000 men, whilst by the end of March 1871, an almost equal number was available at the home depôts. In exceptional cases these troops also are employed for other purposes. The instructional duty which they have to perform may, for instance, be well combined with guard and garrison duty. Such employment outside their proper sphere may, however, easily become disadvantageous, because of the danger that the source of fresh reserves may thus become closed to the army in the field.

Thus, then, troops are divided into various categories according to their several duties; yet the line of separation must not be drawn too strictly, because circumstances may require that the sphere assigned to each should be altered as a temporary measure, or even for a long period. Every one who is not quite a cripple can, in these days, make himself useful in war, provided he only have a good will; for the duties of an armed force are, indeed, most diversified.

4. *Army Organisation.*

The rational composition of an army is of great importance. Seeing that the national military system affects all the relations of social life, and continuously demands the mutual

co-operation of the civil and military authorities, it follows that it is best that the division of the army should be adapted to the civil, or, in ordinary language, the "political" division of the State.

A coincidence of the political and military division has the great advantage of rendering each separate component of the army independent, like the army of a small country. The province in which it is stationed provides its men and horses, and its stores and depôts are also situated there. Its commanding general and the highest civil authorities are independent within certain limits, and are invested with sufficient powers to carry out and decide everything necessary.

This independence of the several parts of the army not only lightens and facilitates the whole course of business, particularly the mobilisation of the army for war, but it also accustoms the higher commanders to that initiative so necessary in war, to acting on their own responsibility. It promotes internal vigour, every part, so to say, having its own roots, and it lends elasticity and simplicity to the whole military machine.

This division into independent bodies (army corps) corresponding to the territorial districts, has so many advantages that it was attempted in very early times. Whilst it was regarded to be impracticable for France before the year 1870, it was proposed in Prussia for the first time in 1795, and led to the formation of an East Prussian, a South Prussian, a Silesian, and a reserve corps.

At that time, it is true, this useful institution was not completely carried out in practice, but the idea was again taken up in 1813. This, to a certain extent, was a revival of the old distribution of the military forces of ancient empires, when subjected races were required to furnish independent bodies of troops.* It is the natural arrangement in a political system too vast to be administered and governed from one central department. But it is a necessary condition

* Only that they were not of equal strength, upon which to-day particular stress is laid.

that the State be healthy, and the authority of its Government firmly established in all departments. In a country where the dominant power cannot implicitly rely upon its strength, where it must ever fear sedition and secession, it will not, in spite of all military advantages, dare to leave the several divisions of the army thus independently organised in their several centres, since by so doing it would resign control of an instrument that can be used against it just as well as for it. Russia neither dares to organise in Poland a Polish army corps, nor in the Caucasus one composed of Caucasian soldiers and officers, who, holding all the workshops, stores, and arsenals, would be in a position to take up arms at any moment. The result of such an institution in Poland was the bloody war of 1831. England, in introducing universal military service, will take good care not to compose Irish army corps entirely of national elements, nor can France keep an army in Algeria entirely composed of natives of that possession. Complete unity, security, and order within the State alone admit of corresponding conditions in the army.

The Army.

In great European armies several army corps must always be combined to form an army, as otherwise the supreme commander would be obliged to take direct control of eighteen, twenty, and more units, and the whole administration would, in consequence, become very cumbersome. The number of corps to form an army depends upon circumstances and upon what is required of the army, and, not unfrequently also, upon the rank, the personal traits and the reputation of the general in command. Personal considerations often play a great part. In modern wars what was really only an army corps has sometimes been called an army, because the commanding officer was a great personage.

On the question as to how many parts ought to form a whole, Clausewitz, in the second book of his work on war, under the heading, "Order of Battle" (Schlachtordnung),

has made all the ingenious and clever remarks that can possibly be made. He rightly draws our attention to the fact that the greater the sub-divisions, the smaller will be the influence of the commander-in-chief, and *vice versâ*. That, however, does not affect us, since the strength of an army corps is regulated by the organisation existing in time of peace. Now, if he means that the army is best composed of eight divisions, viz. one for the advance guard, three for the main body, two as reserve, and one to be detached on the left and one on the right flank, he must have had smaller organisations in view. Eight army corps of modern strength would give much too unwieldy a mass of men; and the care of 250,000 men, with all their baggage, would be too great a task for a single department. The distances over which an army of such magnitude extends become too great, and command most difficult to exercise.

A proof of this was furnished by the French army of the Rhine. It consisted of seven army corps and the Guards, altogether, therefore, of eight components of equal strength. But this mass was scattered over the whole country between Belfort and Thionville, and showed itself insufficiently amenable to control; the commanders of the several corps waited for their orders, and the Emperor's orders, when at last they arrived, had been overtaken by events. As early as August 5th the necessity was seen of grouping the forces in three independent bodies under Marshals MacMahon, Bazaine, and Canrobert, the Emperor reserving to himself the general command of the whole, and the special command of the Guards. The last, proceeding as it did from personal motives, was, of course, impracticable; for whoever undertakes the conduct of the whole ought not to busy himself with details, otherwise one sphere of action will clash with another.

On the German side, the second army, at the beginning of the war, consisted of seven corps, with two independent cavalry divisions, and even here the commander-in-chief was beset with difficulties, owing to the size of the machine. This he especially experienced on August 8, when, whilst

proceeding to one wing, he lost sight and control of the other. Before Metz there were, at times, eight independent corps, immediately combined under one commander-in-chief. In this instance this was permissible, because the whole remained stationary for a considerable length of time.

Less importance now attaches to having separate corps for advanced guard, main body, reserve, and as cover for the flanks. Army corps now march, as a rule, upon separate roads, each corps in itself a small army, and with its own advanced guard. The event of a whole army corps being told off as an advanced guard or rear-guard is certainly only a very exceptional case. Great armies will, of course, now and again, as the second German army did in 1870, march in several *échelons*, and, in battle, whole army corps can be drawn up as a reserve in rear of the firing line, as was done on August 18, 1870. But, for purposes of evolution, such divisions are mostly valueless.

Besides the object in view, considerations of command and the difficulty of supplying such numbers from one centre will be determining factors. If the experience of the late wars be consulted, we arrive at the conclusion that an "army" is best composed of from three to six army corps. Six, as were combined in the third German army, are an easily controllable combination. Three would probably be the smallest number. In an army consisting of but two army corps, one must, of necessity, always be split up and its unity destroyed, as was notoriously the case with the First Army in December, 1870, and January, 1871. Theory certainly insists that an army so weak should be divided into units smaller than army corps. But such an arrangement would, in our case, nearly always come to grief, owing to the fact that the two commanding generals could not be removed with propriety. Where, in time of peace, army corps exist, they must also, in time of war, remain the standard units, and only smaller military systems, which do not in time of peace possess such large combinations, their armies being divided into divisions or brigades, can be constituted otherwise. We must, therefore,

adhere to from three to six army corps, to which would be added one or two cavalry divisions, for a modern army could only in exceptional cases take the field without independent cavalry. The commander-in-chief would thus dispose of army corps and cavalry divisions.*

The Army Corps.

In all great European armies we find an army corps to consist almost universally of a strength varying between 30,000 and 40,000 men. Although its development has proceeded slowly and in haphazard fashion, still its effective strength seems to accord with natural conditions.

After an attempt made in 1795 (but subsequently abandoned) to divide the Prussian army into army corps, the idea was carried out in practice in France during the first war of the allied Powers against France, when various small and perfectly independent armies were formed, each of the strength of our modern army corps. For instance, in 1792 an army of the North was organised, consisting of 35,000 men; an army of the Centre of 28,000 men; an army of the Rhine of 17,500 men; and an army of the South of 40,000 men. Later there was added to these an army of the Sambre, another of the Ardennes, and lastly an army of the Moselle, all of practically equal strength. The supreme command was vested in the Government, there being no individual commander-in-chief of the whole of the forces. When this command passed into the hands of the First Consul, subsequently the Emperor, these armies fell one step in dignity, and became army corps, which could be more easily welded together into the hosts with which Napoleon waged his wars. But, until 1805, the corps of the French generals and marshals were outside France still called armies.

Since that time a subdivision of the army for purposes of war into corps became firmly established. Napoleon would,

* Where the reserve troops allotted to the field army have no corps organisation, individual reserve divisions might be additional.

perhaps, have retained the corps organisation in time of peace, if the preservation of peace had been both possible and pleasing to him. But it never came to this, and he formed the corps only as fresh wars came in sight, composing them on each occasion conformably to his purposes. Prussia, from the experiences gained in the wars of liberation, made the corps organisation part and parcel of its peace establishment, and after the most recent modifications finally arrived at the present strength. 30,000 to 40,000 men of all arms, with their modern equipment, can still move upon one road and deploy the same day into order of battle to the front. The infantry marches in sections of fours, the cavalry four horses abreast,* waggons and guns in single file.

This order has not, of course, been laid down at random, but is in accord with the ordinary condition of the roads and byways. Four men or four horses can march wherever the road is of the ordinary width. Upon broader high roads the columns may, of course, have a wider front, and several guns, and carriages may move abreast. But on striking a narrower passage the formation would have to be changed, as stated above, to four men, four horses, a gun, or a waggon, and the delay thus caused would counterbalance any advantage gained by marching on a wider front. It therefore commends itself to march from the first so as to be able to pass everywhere. Columns will not be able to march on a wider front throughout till the network of roads in Europe has been completely altered. As, however, the value of land increases with the advance of civilisation, a general widening of the roads is hardly to be expected. Double width of front will probably be adopted on good roads and great highways, particularly on the advance into battle, but on such occasions the distances in question will generally be moderate. Moreover, owing to heat and dust, marching in the midst of a broad column will be extremely irksome. Across open country, admitting of any extension desired, only short distances could be traversed

* As we know, the cavalry also have a formation of twos, which may frequently be employed owing to the difficulties of making headway on narrow or partially obstructed roads.

owing to natural obstacles, such as ditches, hedges, banks, or ploughed fields and standing corn, and such a march soon tires the men out.

Thus, as far as we can see, the present order of marching must be adhered to; and here we perceive that the tail of an army corps, slowly moving in column, is at the distance of a full day's march * from the head. If the head of the column becomes engaged, its rear division has to accomplish a task, such as can only be demanded of it under normal conditions, in order to come up to the front. Other corps still further in rear would either not be in a position to do this at all, or would only reach the scene of action in such an exhausted state that energetic action on their part would be inconceivable. In the height of summer, provided the heat be not too great, it is certainly possible to do a long march in the morning, then to rest, and afterwards go into action. But in winter, when in our latitudes it is only light at 8 A.M., and dark again at 4 P.M., this is quite impossible. The strength of an army corps must, accordingly, be calculated with a view to all seasons of the year. The length of a marching column of 50,000 men already extends to 25 miles, and the last troops would therefore be able to reach the battlefield only with good roads, in the longest days, and by extreme exertion. In an emergency this would be exacted, irrespective of casualties on the march, but it may not be regarded as the rule.

Our calculations do not, however, include the trains of vehicles bringing up ammunition and food, or other carriages employed in the hospital service, the conveyance of bridging materials, &c. These vehicles extend over a distance of another 18½ miles, unless the intervals requisite for maintaining order and for preventing the blocking of the roads be dispensed with. And thus it comes to pass, that the tail of the baggage column of a German army corps is at a distance of two days' march from the front. In the case of a column of 50,000 men, with a corresponding increase of

* In round figures 15½ miles.

trains, it would be even as much as three days in the rear, that is to say, the rear of the baggage would hardly ever be able to reach the troops at all until a long halt took place. If an army corps is considerably larger than 30,000 to 40,000 men, it must, under all circumstances, be divided up and made to march on two different roads. Each of the two parts would require a separate commander, for which reason it would be better to make the division permanent, that is, to make the corps smaller.

Again, were an army corps to be of lower strength, the network of roads could not be sufficiently utilised ; and this, with the size of our armies and the difficulty of moving them, is an important consideration. And it is impossible to meet the difficulty by allowing two such smaller army corps to march in succession upon the same road ; for in such a case, the rear one would either be obliged to follow close upon the transport waggons of the leading corps, thus being more than a whole day's march from the head of the column, or it would have to intervene between the first corps and its train, with the result that the leading corps would be cut off from its commissariat and transport.

An army corps of from 30,000 to 40,000 combatants is, accordingly, the *largest and most natural unit* within the army.*

As the enemy is also bound by the like conditions, he

* The figures quoted must not, of course, be taken with strict arithmetical precision, nor must the general rules as to the order of march be too rigidly applied. By shortening intervals, or by marching on a wider front, the depth of columns may be very considerably decreased and more troops allowed to march on the same road. In an emergency the metalled roads would be surrendered to the artillery and the train, the infantry marching alongside over the fields. Napoleon—under different conditions of cultivation—had often recourse to this expedient. Cavalry moves in advance, and, therefore, does not enter into our calculations. At times the train may be left behind, when two army corps could march in succession. Moreover, all the trains of the several arms are rarely combined, part of them being always en route, bringing up supplies from the base. In the compilation of a code of rules governing the movement of troops on a large scale we must start from the assumption of normal conditions and of army corps of normal strength.

cannot, in a single day, bring more troops into action than our army corps. From a purely theoretical point of view, this latter is accordingly capable of holding its own with any army of superior numbers for an entire day, provided that this army advances upon a single road. But, in practice, this certainly happens but rarely, for where several approaches exist, a superior enemy will take good care to utilise them, in order to bring his greater strength to bear.

From these reflections we arrive at the result that an army corps must be completely independent; that is, provided with all that a fighting body can ever possibly require, either in the field or whilst manœuvring. It must, accordingly, be not merely composed of all three arms, infantry, cavalry, and artillery; engineers are also indispensable, as well as *matériel* for building bridges; the administrative department for supplying ammunition, provisions, and the necessary machinery for tending the sick and wounded; even its own reserve of horses. The general in command must also have the disposal of the reserves, which are being held in readiness in their district at home.

Only under these conditions can an army corps be entrusted with all the duties which are imposed by war in a civilised country. Hence we perceive that a weak army corps is in a certain sense a wasteful institution; for the administrative department, &c., must be almost as large in the case of a corps of 20,000 men as in that of one of 40,000.

To give an instance, let us examine closely the composition of the German army corps. It consists of the staff of the general in command, with the administrative, sanitary, and judge advocate's departments; further, of two infantry divisions, a Jäger (Rifle) battalion, which latter, however, is attached to one of the two divisions, the corps artillery,* a telegraph troop, the ammunition columns, and the army service corps, the latter comprising the commissariat columns, the transport

* Several army corps include also a detachment of mounted orderlies ("Jäger zu Pferde").

columns, the pontoon equipment, a field-bakery column, a horse depôt, and field hospitals.*

The two divisions and the corps artillery form the so-called "fighting part," with which we are here mainly concerned. The remaining elements are calculated on the basis of probable needs, according to the lessons of experience. The ammunition columns carry a full supply of ammunition for a whole day's fighting, whilst that required for a second day is carried by the troops themselves. A bloody and decisive battle of two days' duration would not, however, cause complete exhaustion in this respect, provided the supplies were previously intact. The provision and transport columns combined can supply the men and horses of the corps for at least five days,† the hospital can shelter 2400 wounded, that is as many as would probably require assistance after one day's battle. The bakery column suffices in a civilised country, where private industry can be utilised, for the daily bread supply. The pontoon corps is capable of throwing a bridge across a river of average width, such as the Elbe at Meissen. The remount depôt contains a varying establishment of horses, in order to replace casualties; when leaving home, on the outbreak of hostilities, it comprises 200 animals.

Now a few words as to the *Infantry Divisions.* These, in a certain sense, form small army corps themselves, containing as they do a proportion of all three arms, and being independent in all, save in respect of administrative services, food, and ammunition supplies.

The object in their case is the same as in the constitution of the army corps, namely, the capability of independently engaging the enemy. And this may not only be required of a division when detached from its corps, but may also be

* The three bearer companies are attached to the two infantry divisions and the corps artillery as integral components, and count as units.

† The army corps at present comprises six provision and seven waggon park columns. In the aggregate these contain food and forage for their army corps and half a cavalry division for four days, if moderately loaded. Loaded more heavily, though not excessively, they could easily provide supplies for even six days.

demanded of it in a general engagement, since the general in command often deploys both divisions of his army corps side by side, and assigns to each its separate sphere of action.

The divisions also have an origin of historical interest. Duke Ferdinand of Brunswick created them in the Seven Years' War in his small army, composed of English, Brunswickers, Hessians, and Hanoverians. He found it advisable to keep these various contingents, composed of all three arms, together, so that they retained the same commanders at their head. The result was mutual confidence between the troops, a common understanding between the commanders, as well as greater mobility and independence.

The French fought against him, and the same institution obtained with the armies of the Republic, which also, being at first too small to form corps after the modern fashion, were organised in divisions. They consisted as a rule of nine battalions of infantry, six to eight squadrons, and six batteries, had each their own permanent commander, each their own staff, their own separate adjutant's and quartermaster's department, and their own engineers; and were, in short, small independent armies, having an establishment of 12,000 men, though rarely exceeding 5000 to 8000. In the years 1805 and 1806, the Prussian army, though certainly the moment was not propitious, adopted a similar organisation, and thus the divisions have been handed down to our time, although the Napoleonic wars caused an interruption, since during this time the Prussian army corps were divided into brigades. It is undoubtedly and indisputably convenient to have absolutely self-dependent bodies smaller than army corps. These latter will accordingly only march upon a single road where circumstances require it, but will, wherever feasible, make use of at least two roads, upon each of which a division advances.

Towards the close of the Franco-German War, when the German troops were frequently compelled to spread over a very large area, with the enemy in considerable numbers before them, though, owing to his dwindling energy, without

apprehension of any very obstinate fighting, it was frequently found necessary to sub-divide even the divisions, and to furnish the brigades with artillery and cavalry. These latter had tasks imposed upon them such as under ordinary conditions would only be required of divisions or army corps. It is only necessary to remind my readers of Kettler's brigade, which was opposed to the army of the Vosges near Dijon. But such an arrangement was only possible under the then existing circumstances, where the foe had but little martial vigour left.

Our divisions, at the present time, consist of two brigades, or a total of twelve battalions,* three squadrons of divisional cavalry, an artillery regiment of six batteries, a company of engineers, to which is attached the pontoon train and a bearer company.

The allotment of artillery is on a very liberal scale, and in itself contributes to enabling the division to engage independently in a serious combat, which, when a corps is marching on several roads, may often fall to the lot of the division first coming in contact with the enemy. Such a struggle will frequently last for hours, before the other division can approach from its side, or the corps artillery move up from the rear. A good division may rightly be expected to hold out for as long as half a day against overwhelming numbers,† in order to facilitate the concentration of the whole corps.

The cavalry will be sufficient, unless the division is sent on a special mission which entails movement to a long distance from the army. A single squadron, as provided for a Russian infantry division, could well perform the daily duty of reconnaissance and communication, in which infantry cyclists would co-operate. Our system of outposts, in which cavalry play a leading *rôle*, demands, however, greater strength to provide the necessary reliefs. The possession of six squadrons also admits of the temporary formation of a regiment for

* In addition a "Jäger" (Rifle) battalion is attached to one of the divisions. (See p. 39.)

† Providing they all come from one direction.

some important detached duty, without depriving the divisions altogether of mounted troops.

The proportion of arms in a division may thus be considered appropriate.*

After the two infantry divisions comes the corps artillery as the third element of the army corps, numbering six to eight batteries. These are most indispensable to the general in command, to enable him to give a decisive turn to the action in which his corps is engaged. A line of guns of this length soon makes its effect felt. To the point at which it appears and where its fire prepares the attack, the infantry, too, involuntarily inclines. Its front demarcates that of the whole army corps. No one but the general in command has a right to dispose of the corps artillery. The two infantry divisions are always more or less independent, as each divisional commander thinks he has a certain proprietary right in his own division and therefore endeavours to make his will pre-eminent. This becomes somewhat evident when both, marching on separate roads, simultaneously come in contact with the enemy before direction from above is possible.

Much has been written and spoken upon the point, that the organisation of the army corps in two infantry divisions is not very practical. Clausewitz says: "There is nothing more clumsy than an army divided into three parts, save one divided into two only, for then the commander-in-chief must be almost neutralised." And this maxim may be applied in the same sense to the army corps. In recent times, Meckel has pointed out the inconvenience of bipartition. The general in command must either, if he will not be altogether effaced, destroy the unity of the division, or, if he wishes

* While the army corps consists of only two divisions, we should prefer a war strength of eight battalions per brigade = sixteen per division. This composition would bring the army corps approximately up to a maximum strength of 40,000 men, which, as already stated, is most suitable in view of complete utilisation of the network of roads. A modification of the peace establishment would not be necessary, the number of battalions being increased by the formation of a fourth battalion per regiment on mobilisation.

to spare that, must submit to be neutralised. Either of the two is a misfortune.

The formation of the army corps in three divisions, each composed of three infantry regiments of four battalions,* with divisional cavalry and artillery, would undoubtedly facilitate command in the field. But the organisation in two divisions is historical in Germany, and is so intimately bound up with the whole peace organisation of the army, that it cannot possibly be abandoned without disturbing the latter. So long therefore as the present constitution of the army remains, we shall have to content ourselves with the two divisions in an army corps, and the corps artillery must necessarily remain the third element. Its distribution among the divisions, a plan often ventilated, might entail the disadvantage of depriving the general in command of the most effectual instrument for personally controlling the course of an action, and of the best means of attaining superiority at the decisive point.

The Cavalry Division.

Formerly cavalry divisions were not constituted till war appeared imminent, but now they are regularly assembled for the purpose of manœuvres.†

Their strength cannot, as in the case of army corps, be determined by a normal standard. The present establishment is the joint result of considerations affecting organisation and of theoretical speculations. In fact, its strength, like the cavalry division itself, is a kind of artificial product.

The decisive moment in a cavalry engagement is the short shock at full gallop, when mere chance plays a great part.

* This formation would have the advantage that the provision of the advance guard of the division would not entail the dismemberment of a brigade—the latter organisation being dispensed with—as a complete regiment would be employed. The two regiments composing the main body, even after detaching a battalion or two, would still represent a respectable force.

† Only the Guards corps has also in time of peace a cavalry division of four brigades.

Cavalry must, accordingly, be equally quick at turning to advantage all the favouring incidents of the combat, as at counteracting adverse conditions. The cavalry is therefore divided into lines, which engage, mutually supporting each other. It furthermore seems to be the generally accepted opinion, that the provision of three lines—one for shock action, another as a manœuvring or supporting body, the third as a reserve—supplies the best means to the end in view, and our normal organisation of the cavalry division in three brigades corresponds to that view. The three bodies are of uniform strength, not only from considerations of leading and administration, but also because it is impossible to determine beforehand which line shall be used for the charge, which for manœuvring and supporting, and which is to be held in final readiness to decide the favourable issue of an engagement or to neutralise a reverse. Each brigade must always be prepared to take the place of either of the other two, as dictated by the requirements of the moment. Greater freedom is thus gained in turning fleeting favourable moments to account. Once, however, the time and direction of the stroke are determined, it will commend itself to stiffen the brigade designated to charge, so as to give the first line for the time being sufficient strength to outflank the opponent, to envelop him, and to take him in flank and rear. It would be the task of the second line to guard against the enemy repelling the first line by sudden strokes, thus acting in close co-operation with the first line, though from a different point of view. Even the third line, though intended as a reserve at the disposal of the leader, must unhesitatingly be thrown into the scale at the decisive moment, whenever it appears probable that victory would thereby be assured or be made more complete.

The allotment of some artillery to cavalry divisions—already made a necessity by universal usage—is always of advantage, not merely for occasionally enabling the cavalry to pass a defile held by an enemy, but also for preparing their charge by unexpected fire.

Cavalry divisions therefore consist, as a rule, of three brigades, each of eight squadrons, and two horse artillery batteries, with the addition of an engineer detachment.

The combination of two cavalry divisions into a cavalry corps for particularly vigorous exploits has recently been tried at peace manœuvres. The last instance of the employment of such corps in the field is supplied by the American War of Secession, the best known example being the battle of Brandy Station, June 9, 1863. The methods employed there were not, however, in accordance with our aims and views. Much fighting was done dismounted and by individual regiments, rather than by closely formed squadrons of full strength.

The handling of such large masses of horsemen is naturally a difficult task, requiring on the part of the commander extraordinary judgment, rapidity of decision, and a good eye; and the ground, too, must be favourable. In spite of the highest skill in surmounting obstacles, in central and western Europe cavalry meets with many insurmountable obstructions. There are not only walls and other permanent enclosures, or swampy watercourses, but corn and rice fields, vineyards, ground under irrigation, even plots of newly ploughed heavy soil, can check the speed of the squadrons or render their contact so feeble as to deprive it of value. But the evasion or passage round such areas of the fighting zone will become less feasible with the growth of the body of cavalry to be handled.

In a combination of favourable conditions, bold as well as skilful leading and open ground, the temporary combination of cavalry corps may be productive of great results. It will naturally occur where a number of cavalry divisions precede the two advancing armies; hence wherever cavalry are opposed in large masses, the stronger and more enterprising of the two being determined to rid itself of its opponent by a vigorous onslaught, so as to facilitate its purpose of reconnoitring the enemy's dispositions.

On return to normal conditions the immediate repartition into divisions would, however, commend itself.

In former times a universal belief prevailed in the necessity of a reserve of artillery also. In all great battles this reserve played practically the same *rôle* for the commander-in-chief as does the present corps artillery for the commander of an army corps. Its employment was, however, restricted to one or two days in the course of a whole campaign, and the toil of dragging such a cumbrous mass of guns behind the army was found to be inadequately profitable. Besides, the corps artillery of several army corps enables the commander-in-chief to collect at discretion a formidable mass of artillery during the progress of a battle, and in the case of corps being held in reserve, the employment of their corps artillery as a great reserve of guns for the army is the only means of profiting by the presence of such numbers of guns otherwise unemployed.

In modern armies the place of the artillery reserve is taken by the "heavy artillery of the field army," whose particular *rôle* consists in dealing with frontier fortifications and barrier works impeding the free movement of the armies, or in accelerating operations against fortresses by *coups de main* on advanced works. This park of guns includes howitzers and guns and mortars of heavy calibre, which, drawn by horses of a specially heavy type, follow the troops, in readiness to be placed in position as required.*

It might be of further interest to arrive at the natural size of the smallest units. In the case of the infantry it has hitherto been considered proper to adopt a number capable under all circumstances of being controlled by a single human voice, which resulted in the establishment of battalions of 1000 men as the smallest tactical unit. The company was regarded as an independent body merely for

* These guns must not be confounded with field howitzer or field mortar batteries, whose proper object is to prepare the assault on field entrenchments by fire action, and which are required to have sufficient mobility to manœuvre in conjunction with the other guns of the army corps.

purposes of training and minor details of administration, never for fighting purposes. All this has been altered in our days. Dispersed order tends to lengthen the firing line, and to increase the distances between the several parts of a battalion, so as to render control by word of command impossible. The latter may still be possible in the case of a company, though even here it will mostly become a very difficult matter. Improvements in weapons have, moreover, increased the force inherent in smaller units, and thus established their claim to independence.

Another solution might be found in the consideration of what would be the largest body of troops able to venture on entering the fire zone in close formation without risk of immediate annihilation. It is generally admitted that a battalion offers too large a target on coming within range of hostile guns; and for that reason alone, if for no other, it is divided into four companies. This seems to be an implied admission that the battalion has ceased to be strictly regarded as the smallest tactical unit in the infantry, and that the company of 250 men has become so. The number of companies in an army corps is, however, too great, and it would practically be impossible to deal with 100 companies, certainly much more difficult than with 25 battalions. Even a regimental commander would experience difficulty in handling twelve single companies if the battalion organisation were abolished, hence the retention of battalions as tactical units is most appropriate. It should be impressed upon companies that, notwithstanding the rapidly evolving phases of a battle, they must never lose touch of their battalions, and must constantly endeavour to maintain their proper place within that larger unit. Every commander of a company must thus, not only during an engagement, keep his eye on the enemy, but must also pay attention to his position in relation to the other companies in accordance with orders issued. Our regulations express these principles in the following words: "The combat of a battalion is an *ensemble* outside the scope of which no part of the unit may step."

In the cavalry a squadron of 150 troopers forms the smallest tactical unit, the number being dictated by experience, which proves that 150 horses and a corresponding number of men can still be readily supervised in all details by a single commander. This number also corresponds approximately to an establishment which a landowner in northern Germany would consider feasible to keep under single management; where an estate required the services of more than 150 men, with a like number of horses and draught animals, outlying farms would be established.

The strength of a battery of six guns as the smallest tactical unit has been determined by a similar process of experience. Formerly a battery varied between six and twelve guns, and at a more remote period—during the seven years' war, for instance—batteries were made up from the gun park as required.*

We now see that battalions of 1000 men, squadrons of 150 troopers, and batteries of 6 guns represent the smallest tactical units in the German army. The army corps with its two divisions, a rifle battalion and the corps artillery, numbers 25 battalions, 6 squadrons, and from 18 to 20 batteries, or 25,000 infantry, 900 cavalry, and 108 to 120 guns. Including the staff, the engineers, and the gunners, a complete army corps may be taken in round numbers at 30,000 combatants.†

The cavalry division of three brigades of eight squadrons and two horse batteries numbers 3600 men, with twelve guns.

In the case of troops not belonging to the field army, greater latitude is allowed in the constitution of the larger organisations, according to requirements. In regard to the first reserve, strong bodies, corresponding to those of the field army, are naturally the most suitable, hence they would be

* In the case of the heavy artillery of the field army, which requires a much larger number of ammunition waggons than field batteries, it may be possible to revert to four-gun batteries.

† Similar data respecting the British Army will be found in various English text-books.—[Tr.]

formed into divisions * or, possibly, into army corps. In the case of garrison troops this will only be practicable where a considerable force is employed upon the same duty, as, for instance, in watching a district, guarding an important centre, a section of fortified works, a line of coast, &c. Generally, it will be well to leave to the smaller organisations their independent existence, since, when combined in large commands, their organisation must needs be broken up immediately they are required for active employment.

So much for the organisation and composition of our armies.

5. *The Corps of Officers.*

"The soul of the Prussian army is in its officers." This saying of Rüchel may, at the time of its delivery, have been laughed at on account of its somewhat ludicrous form, though the idea is really excellent. That the spirit of the corps of officers bespeaks the spirit of the whole army, is merely a repetition of what is universally observed in political life. So long as the educated, the leading, classes maintain their efficiency, the people also will be stout and capable. On the other hand, the decay of the ruling classes of society entails the decay of the whole nation, except it be that a great social revolution sweeps aside the former, and replaces them by others, whereby a temporary respite may be afforded, but never a permanent remedy. In the Turks of the present day we may perceive what lot is in store for an honourable, proud, brave and deeply religious people when deprived of the leadership of the upper classes. The best possible troops under bad officers are at most but a very deficient body. The corps of officers must accordingly be chosen from the best classes of the people, who exercise even in ordinary life a natural authority over the masses. Frederick the Great, the founder of the Prussian corps of officers, recruited it entirely from the hereditary nobility, which alone at that time, by

* A reserve division is formed on the general model of an infantry division. It also includes a reserve supply column, and three reserve waggon park columns,

social standing, education, and tradition, could supply suitable material. When circumstances altered, the composition of the corps of officers became changed. Though even to-day the officers are chosen from the German aristocracy, yet this means the aristocracy of education, which has taken the lead in social and political life. Especial value is, and is rightly, laid upon education, because it is the basis of noble and moral qualities. But we ought not to cling exclusively to scientific attainments, but also pay proper regard to the qualities of the heart and character. It is required of an officer that, in the interest of duty, he should forego personal advantage, luxury and wealth. Hence all sections of the population who are not, by reason of their vocation, compelled to prefer personal advantage to great and public ends, are fitting persons to recruit the corps of officers. In this connection sons are educated up to the feeling of duty by the very example of their fathers. Egotism is beyond all doubt the bitterest enemy of the efficiency of the corps of officers, and every occupation calculated to increase it is an enemy of the latter. It was, therefore, most appropriate to give the corps of officers the character of a profession in which each member is the social equal of all others, all having common interests, and also common obligations, and in which the whole body is held responsible for each of its individual members. Thus the corps of officers has acquired certain characteristics, reminding us of the Orders in the heyday of their existence, and it ought to be a genuine brotherhood of knights.

An ideal trait must be peculiar to its whole nature, otherwise it is incapable of fulfilling its purpose. Let us picture to ourselves in what this mission consists. In the most trying situation possible in life—namely, in the face of death—officers are called upon to lead a mass of men, and prove their influence over them. To do this, exceptional qualities are demanded, such as cannot, in the case of the large number included in the corps of officers, be hereditary in every instance, but which may in great measure be gained by education, and especially by continuous intercourse with the best men of the

nation. And this is only rendered possible by the institution of social equality.

Influence over the soldiers must be gained in time of peace by a proper application of the superior qualities of intellect and character, in training and leading them. This, above everything, must also include care for the well-being of the soldier. A decay in the corps of officers and its influence sets in immediately the officers begin no longer to trouble themselves about the private soldiers and to confine themselves merely to giving orders. When authority over their troops can only be enforced by noisy orders, it is, as a rule, already enfeebled. The worse the discipline in an army is, the more despotic a form it assumes. In addition to influence gained, example is requisite, and this is more the case in time of war than in peace. The officer must not care for his life. Just in order to inspire his men, he must frequently expose himself more than the ends of battle would otherwise at the moment demand. By thus showing himself exceptionally fearless and self-sacrificing, he awakens noble impulses in the soldier's breast, for only by these can great deeds be done. Superior position in the state is therefore of necessity the natural due of officers as a class. *Noblesse oblige.* He who is accustomed to regard himself as belonging to a special class will also, in war, consider himself bound to do something special. But he who, on the other hand, always lives in an inferior and subordinate position, will only in few cases feel himself impelled to emerge into sudden prominence. Slaves are always cowards. But the slavery of an inferior state of life is no less galling than any other. It deprives a man of pride, which is as indispensable to an officer as is his daily bread, to enable him to exercise his authority under the trying circumstances of active service.

The social advantages which are conceded to his class are capital profitably invested. Even the prejudices which the officer sometimes entertains, owing to more deference being paid to him in his youthful years than to others of his age, bring in good interest on the field of battle, to the advantage

of the Fatherland. His duty is to command and to lead, and he must therefore feel his dignity, and be proud of his position; and there is no harm done even if he be somewhat more puffed up with a sense of his own importance than circumstances justify.

When, furthermore, the officer must forego the prospect of wealth, or even permanency of home, and risk the future welfare of his family, all which is assured to the landowner, the merchant, and the tradesman, it appears only right and proper that he should be compensated for relinquishing these advantages by the bestowal of outward distinctions. And it is just these latter that most frequently earn for the officer class the envy of others; and yet we must not forget that these are only a just, or even a modest, compensation for great sacrifices. No other calling demands readiness at all times to sacrifice one's life. The illustrious Decken, eighty years ago, expressed himself in very clear language upon the position of the officer in the State.

"Egotism has passed from individuals into whole classes," says he; "one class esteems another only in proportion to the advantages which it can derive from it, or only in so far as it recognises in the other a similarity of character and an immediate community in striving for one and the same end. The sovereign in a monarchical state favours the nobility, because he can depend upon its immediate support. In a commercial country, the merchant is held in the highest esteem; and, after his own vocation, he considers navigation to be the most honourable pursuit. Personal interest, shaped according to various needs, is the measure of the value of the occupations and aims of one class in the eyes of others.

"The literary man loaths war because the Muses take to flight on hearing the din of arms. The statesman is appalled by the enormous expense caused by military preparedness. The civil bureaucracy is jealous of the power it is obliged to surrender into the hands of the military authorities, and often treats soldiers like citizens belonging to another State. The moralist is vexed at the gay life of the officers; while the

dandy envies him his fine dress and his sword, and the agriculturist cannot pardon the soldier for enlisting his sons and servants. But in case it has happened that any one has ever been so unfortunate as to incur our displeasure, we are on the whole very much inclined to remark all his failings, even the most insignificant, which before would not have roused our attention, and to ignore his merits entirely. If once we have taken a dislike to a class, every occasion tending to intensify this feeling must be regarded as a fresh tributary by which the brook swells at last into a raging stream. Now, when in consequence of a long peace the memories of past services have become completely obliterated, and there is no immediate prospect of a war, the citizens take more and more note of the burden of the upkeep of an army, and attempt to convince themselves of the uselessness of this institution, adducing in support of their assertions many specious proofs." The present day, especially in Germany, is favourable in this respect to the officer class. Great and successful wars have enhanced its renown, and have moderated the envy of others. But should peace endure for several decades to come, it may again become necessary to remind the people that external favours may, without harm, be extended to the military profession, and especially to the officers, and that such may even be profitable. An officer class of inferior social position may produce excellent, peaceful, and industrious citizens, but it will be poor in bold and courageous soldiers. Without social privileges, the class must of necessity soon sink down to a very insignificant level; for in civil life prosperity determines social grades, and our officers are—thank God!—in the majority of cases, as poor as church mice.

The officer should, furthermore, preserve his youthful vigour to a comparatively high age. It is his province to stake in war, and upon its uncertain chances, woe and weal, life and reputation. And this demands, in addition to military qualities, a light heart, ever hopeful and averse to looking at the black side of things. But this light-heartedness will scarcely be preserved by one who has been oppressed by

a long life of care. An existence free from care—yet no more than this—should be secured to officers by the State, in its own interest. Officers who eke out a miserable existence in secret, and are always looking forward to the moment when, freed from the burden of splendid misery, they will be enabled to live in some quiet nook on a moderate pension—officers of this description are of no service to the army and their country.

How can such men be animated by the virile and bold impulses indispensable to a leader in battle? The preservation of physical activity must also be considered. It is not a little to demand of a man and father of a family of fifty years and upwards, that he should dash fearlessly in the teeth of the enemy's guns, at the head of his squadrons, and ride unfalteringly over hedge and ditch. Let any one demand this of one of our sleek merchants, of a comfortable squire, of manufacturers and private gentlemen of a like age, and we shall find only very few that will not refuse it as being an act of madness, quite ill-suited to their years.

A portion of youth's dashing recklessness must be preserved by the officer until the end of his career, and he will only be able to do this if his position guarantees him some freedom from the ordinary stress of everyday life. An aristocratic trait must pervade his whole being.

The Fatherland, in granting its officers an honoured and self-sufficient position, obeys the dictates of prudence and self-preservation. More depends upon the energy and excellence of this class than of any other; to wit, the honour and liberty of the whole nation.

Important for all great European armies of the present is, also, the class of reserve officers, who only leave their civil occupations when war summons them to the standard, or when manœuvres require their attendance. The name differs in various armies, but the essential point remains the same.

No State is sufficiently wealthy to maintain a body of professional officers in sufficient numbers for the army mobilised for war, when the peace establishment expands

to thrice its strength and above. In Germany we should meet with the difficulty, that the barriers of the professions and classes which supply suitable material for our corps of officers would have to be broken through.

Not even the field army proper can be entirely commanded by professional officers. The formation of the many new staffs required on mobilisation absorbs a large number of such officers, who are thus withdrawn from duty with their units. There are, in addition, many details required by the first line of reserves, the Landwehr, and the depôt troops. It will thus be unavoidable that many companies of the line will be in the hands of reserve officers immediately after the first few battles. At the end of the war of 1870–1871 even vice-sergeants-major (*Vice-Feldwebel*) had in many cases succeeded to the command of companies. As early as December 1870 we find a Bavarian infantry division so reduced by severe losses, that it only possessed in the front a single captain of the line.

Unconsciously the question arises what would have happened if the war had dragged on through one or two years more. We are led to the conviction that, given a state of similar circumstances in the future, a moment must come in which scarcely any but the higher commands will be in the hands of active or regular officers, whilst all the lower will have passed into the hands of the officers of the reserve and the Landwehr.

But, in the course of a great war, it may reasonably be expected that the necessity will arise for the formation of fresh levies of troops, in order to replace casualties, or to compensate numerical superiority on the part of the enemy. As the supply of line officers will have been long since exhausted before such a crisis is reached, only the reserve can possibly supply the leaders. Then eventual success depends upon the capacity of this class, for only good leaders produce good soldiers.

The importance of training a large body of officers of this category cannot, therefore, be called in question. It is

equally necessary that the conviction of this being the case should be yet more widely spread.

It is not every one who has the inclination and talent for being a professional officer in time of peace. Every capable man belonging to good society should, however, conceive it to be his duty to prepare himself to be, when necessity demands, an efficient substitute for a professional officer. In time of war all military routine becomes simplified. The duties of the active officer can surely, with few exceptions, be undertaken by any educated man who is healthy and strong, provided he has only a firm will. And this all will have, if only the importance of this matter be grasped. The desire of attaining the position of an officer in the reserve should be prompted, less by considerations of personal honour, than by a sense of duty.

Even in time of peace the position of officers of the reserve is an important one. Civilians, yet closely connected with the military service, of the inner significance of which they receive a much deeper conception than the simple private soldier, they are pre-eminently qualified to foster and keep alive love and aptitude for the profession of arms, thus being potent champions of all the interests of the army.

Germany possesses, beyond all doubt, the best material for a large and efficient body of reserve officers, having, moreover, the power of tradition in its favour. Generally speaking, every one in Germany passes through a period of hankering after a soldier's life. The landed proprietor, the manufacturer, the lawyer, the official, &c., all of whom circumstances have launched into other careers, endeavour, at all events in the reserve and Landwehr, to satisfy the inborn aspiration. With greatest zeal they devote themselves, from time to time, to the noble craft of arms, and it is a real blessing for the Fatherland that such is the case. If it be decreed some day that it should be opposed to several enemies in one gigantic struggle, it may find its salvation in the fact that its supply of efficient officers will not become exhausted. It will then

be capable of bringing into the field fresh bodies of disciplined troops, whilst its enemies will only be able to beat up a mere rabble.

It might have the appearance of injustice not to demand equal privileges and solicitude for the non-commissioned officers and men as for the officer. But there is here a material difference, in that they belong to the army only temporarily, their military status not being, as in the case of the officer, their one and all. Besides, they perform their duties in early years, when care is, as yet, far removed. The hope of employment and of a future free from care awaits the soldier in civil life after the discharge of his short period of service with the colours. The non-commissioned officer relies upon the prospect of gaining a permanent situation in consideration of his service in the army, a prospect which otherwise would have been closed to him.

Liberal provision will also not be thrown away in the case of the rank and file. None must suffer want, nor must comparison of his lot with that of his equals in civil life compel unfavourable conclusions. Contentment is no unimportant factor in the internal efficiency of an army. It is the outcome of a due proportion of work and comfort. Spoiled Pretorians will do their duty as badly as overworked and hungry troops. Pride of his cloth and whole-hearted devotion to the service can only be instilled into the soldier by due provision for his wants, and by fair treatment.

He must, above all, be assured that, in case of wounds or sickness, he will not be abandoned to distress, and that his relatives, whose bread-winner he was, will be provided for if he should die on service. This will create a sense of security, productive of courage and vigour.

Non-commisioned officers and soldiers rapidly come and go in the army; its officers alone are the constant element by which tradition is handed down. Year by year fresh contingents of recruits pass through their hands, and the whole nation in arms is subjected to their influence. The work of great

thinkers and of great eras in the army can only be passed on to future generations through the medium of the officers. As the officers, so the army. More true to-day than when it was spoken is Rüchel's saying, "The spirit animating the corps of officers is the spirit of the army."

SECTION II

THE COMMAND OF ARMIES

1. *Generalship.*

This chapter on the command of armies and generalship might have followed that on evolutions and battle. But as many points stand in close relation with what has just been said regarding the corps of officers, its place shall be here.

History teaches us the great importance of generalship. We see the Macedonians victorious over enemies tenfold exceeding their own strength, and do not doubt that they would have succumbed, had another than Alexander been at their head. Hannibal made the Carthaginians triumphant for a time over the first military people in the world. Only the genius of a Cæsar could triumph at Alesia, Pharsalia, and Alexandria. Frederick withstood the world, even when the trained soldiers, with whom he first took the field, had long since lain dead on the battlefields, or were lying wounded in the hospitals, and he was compelled to take all he could possibly entice to his hard-pressed standards. The French, after Rossbach, marched victorious through Europe when led by a Napoleon. Great generals succeeded even in giving lustre to the arms of subjugated and decadent nations, as proved in the instances of Aristomenes, Belisarius, Narses, and Aëtius. Even the now degenerate people of Persia, as late as towards the end of the last century, still undertook great wars of conquest, and advanced as far as Delhi, after Nadir Shah had raised himself to the position of ruler.

With the death or retirement of a great general the warlike renown of his country often departed. When Alcibiades

no longer led the Athenians, their armies were annihilated. Carthage was doomed after Hannibal had left it helpless. The hordes of the Mongolian world-devourers were easily overcome when no longer led by Ghenghis Khan and Timurlenk; and the terror of the Turkish arms became extinct with the line of the Great Sultans. When Turenne died, in the middle of a successful campaign, his successors were within an ace of total defeat, and they were only able to save the till then victorious army by retreating across the Rhine. "There is reason for surprise" wrote Frederick the Great, in his history of his times, "that the close of Charles VI.'s reign should be so deeply below its glorious beginning. The cause of this must be sought solely in the death of Prince Eugène. After the death of this great man, no one was found to replace him." It is a still more striking fact that in 1813 and 1814, the French were almost invariably defeated when Napoleon was not present; but were, as a rule, victorious so soon as the Emperor was again at their head.

These historical experiences seem to justify the conviction that but little depends upon the conditions of the army, but everything upon the genius of the general. Indeed, even in these days, the ability of the commander-in-chief may be regarded as the most essential condition of victory. In the wars of the future, too, the personality and genius of the general will always make themselves felt. Yet things have altered in comparison with earlier times. In our day, special qualities are indispensable if the ladder of the military hierarchy is to be ascended up to the height requisite to bring out the highest qualities of a talented leader, and to turn them to good account. We are right in saying that character makes the general. But strong characters are apt to disport themselves in a manner more disadvantageous than favourable to their advancement in time of peace. Had it not been for the French Revolution, Bonaparte and Carnot would, in all probabality, have ended their career as lieutenant-colonels or colonels. And Frederick the Great would, beyond all doubt, had he not been born a prince, have retired as lieutenant.

Adolph Schmidt proves, in an historical parallel, that the Crown Prince Frederick, if his father had had him executed in 1729 after his unsuccessful attempt to escape, would necessarily have even been held to have been an obstinate, malicious, "effeminate" or nerveless good-for-nothing, who never did anything for the love of it, had no inclination for anything, and was of no use—in short, was in everything the reverse of his wise and pious father.*

Great generals could, accordingly, only rise up independently of their surrounding circumstances, so long as the armies remained more or less free levies of the people, and primitive naturalism pervaded all their institutions. Under such circumstances, energy and personal influence find the widest scope; it dwindles with the arrival of a settled and orderly state of civilisation. Nadir Shah would, in Germany of the present day, be undergoing penal servitude, for he began his career as a brigand-chief.

The excellence of the troops now stands in a more intimate relation to the excellence of their generals than was the case in former days. Only where a healthy state of things prevails in an army, will good generals be found at the head of it. The way of these latter is barred so soon as favouritism and the spirit of clique and partisanship enter in, or subservience is more highly esteemed than sincerity and force of conviction.

The legend of brave armies defeated because of the incompetence of their leaders will scarcely be repeated in our days. How is it possible for bad generals to train such good troops? or how, on the other hand, should men, who have actually formed efficient armies in time of peace, fail utterly in time of war? Genius may make an exception, in so far that it knows how to achieve great things with means insufficient for ordinary mortals. As a general rule, good armies and good generalship may, however, be regarded as inseparable.

Hence we must not merely examine what qualities a man

* Adolf Schmidt, "Epochen und Katastrophen," pp. 258, *et seq.* Berlin, 1874.

needs in these days in order to achieve great things as a general, but also what general conditions must prevail in an army to render the rise of great soldiers possible.

The general, in hours of danger, must guide the armed masses according to his will. He must, therefore, be born to rule men rather than to please them. Born rulers are also great soldiers; and it is easy to conceive that the greatest military leaders must be looked for among the occupants of thrones.

Dominion over others is essentially founded upon the power of will. It is seen in the case of boys at play, how the one who knows how to give the most definite expression to his will leads the whole band. Some of his fellows yield to him from indolence, others from want of confidence in their own power. In later life the same is repeated. A claim advanced with determination seldom meets with opposition; it inspires respect, and the great masses of mankind like to be impressed by their leaders. They thus acquire a sense of personal security, and that, again, enhances their courage and capacity.

It is impossible to conceive of a strong will apart from self-reliance. This latter quality again presupposes a certain exclusiveness, which is advantageous to the soldier. Highly intellectual natures are apt to adopt a certain universality of view which is prejudicial to success within the narrow sphere of life in the field. Penetrating, as a rule, too deeply into the real nature of things, and discerning risks and dangers more clearly than others, they are assailed by doubt, that destroyer of self-reliance and that arch-foe of all success. In the hydra-headed council of war, held on October 5, 1806, in the Prussian headquarters at Erfurt, Scharnhorst delivered that memorable saying, that in war it mattered not so much what was done, but that it should be done with vigour and singularity of purpose. His warning was not attended to, and, although there was no lack of shrewd heads, only paltry measures were adopted. Clever men usually look too far afield for the *best* method, and fail to perceive the paramount

importance of the timely adoption of a *practical* method. How greatness of intellect, which in time of peace enjoys the highest consideration, decreases in value in times of war, when opposed to will, is exemplified by the result of nearly every counci of war.* It is undeniable that in an assembly of experienced and capable men, the highest aggregate of intelligence must be collected. Yet Frederick was right in peremptorily forbidding his generals to hold a council of war. That keen judge of human nature knew full well that nothing is ever gained thereby save a majority for the "timid party." The intelligence collected in a council of war is wont to be productive of no other advantage but that of assiduously searching out all the weak points of an army, and of demonstrating the danger of action. Thus the will of the general becomes only still more unsettled and weakened, and a "council of war" has become an ominous word, the sound of which, as a rule, is equivalent to capitulation or defeat. It always had its origin in the presentiment of approaching disaster, and in the commander-in-chief's desire to share responsibility with others. Hence intellectual individuals avail less than men of strong will and abundant self-confidence.

Strength of will may be an object of legitimate pride, but does not benefit its possessor, since it imposes upon him an undue burden of responsibility.

Courage and love of responsibility are necessary to a general, but are rare gifts. Very many men dash thoughtlessly into the gravest perils while another is accountable, but are irresolute when they themselves have to bear the responsibility. To take this responsibility upon their shoulders may, in case of misfortune, be equivalent to loading

* In time of peace, when will power and courage of responsibility are subjected to fewer trials than in time of war, the worth of an officer is, as a rule, judged too exclusively by his intelligence, which guarantees success in war in but a small measure. Hence the frequent disappointments in the persons of generals for whom, in time of peace, a great future was hastily predicted, and in whom absolute confidence was placed, which subsequently was not found justified.

themselves with blame. In war, men of high rank behave like children who, when they have done mischief, are the first to exclaim, "That is your doing!" When their eye scans the field strewn with corpses, there is no consciousness dearer to their hearts than, "It is not my fault." It is one of the secrets of the better side of human nature, that guilt is more feared than the consequences of misfortune. The poet who brought the accusation against the heavenly powers—

> Ihr lasst den Armen schuldig werden,
> Dann überlasst Ihr ihn der Pein—

well discerned the secrets of our hearts. Hence courage of responsibility is a precious gift of heaven, which alone enables a general in high command to achieve great results; for, even if his experience and intelligence be inadequate, able assistants will probably be forthcoming to supply his deficiency.

Courage of responsibility is born of a certain nobility of mind which must be inherent in the general, and which ennobles his whole nature. It consists in a sense of superiority which raises above the common herd, *without making one presumptuous*, and which may be innate, or may also be acquired in the school of life. Severe trials purify a well-formed character. They teach him to think little of earthly weal or woe, to face dauntlessly the possibility of suffering fresh disaster, to bear blame, though guiltless, and to be indifferent to condemnation by the crowd and to the displeasure and the hatred of the powerful. Extensive and thorough knowledge may also produce this nobility of mind. Such knowledge certainly makes us recognise the limitations of human wisdom, while, on the other hand, it teaches that war presents us with no enigmas incapable of solution, but that the employment of the natural powers of intellect is all that is needed. Nowhere, in the whole system of warfare, is there any dark corner which the magician's art alone can illuminate. Knowledge enhances assurance, whilst ignorance is the beginning of moral decadence. The feeling of com-

manding the means and of having, at worst, to fight against misfortune, steels self-confidence. It tells us, "What others can do, you can do also," and thus stimulates the will to rule and to lead.

Now whether this nobility of soul be a natural talent, or whether it be acquired by education, or in the school of experience, it is the very quality which soldiers most highly esteem in their general. It is a guarantee against the unwelcome effects upon them of danger and disaster. It gives that calm tranquillity upon which excitement breaks as a ship upon a rock in the sea; it produces an even balance of mind, diffusing a comforting effect, like an electric current, over the whole army.

"A strong mind is not one merely capable of strong emotions, but one which preserves its equilibrium when worked upon by the strongest agitation, so that, in spite of all inward storms, the action of intellect and reason remains as keen as that of the needle of the compass on the tempest-tossed ship."

"Strength of mind," as thus depicted by Clausewitz, corresponds practically with what we have termed "nobility of mind." It inspires confidence throughout the whole army, from the private soldier to the general.

Courage of responsibility and nobility of mind are now more necessary to the general than ever, owing to the increasing dimensions of armies, and their wide dispersion in the theatre of war. The uncertainty of subordinate commanders must, of necessity, increase, because of the difficulty of appreciating the situation as a whole from their particular situation. On the other hand, the possibility of immediate control from above is proportionately diminished. The commander-in-chief thus finds himself more frequently in the position of being obliged to accept responsibility for events, the course of which he is unable to direct. Relying on inaccurate information, or short telegraphic reports, he must, without personal knowledge of local conditions, order operations which, perhaps after much bloodshed, fail in their

object. He then is made responsible, and upon him the reproaches are showered.

In the Franco-German War, such orders were despatched from Versailles to the Lisaine, to the Loire, and the North. They were successful, but chance circumstances might have caused them to end in disaster. The general must be aware that, even with the most careful deliberation, he is playing a dangerous game, upon which he stakes his reputation, his safety, and, it may be, his very life. The French general who, in order to rid himself of personal responsibility, empowered his subordinates, in all doubtful cases where they could not ask for orders, to act as if they had actually been received, was well acquainted with war and with human nature.

Before the introduction of long-range weapons, battlefields were of about the size of the present manœuvring ground for a brigade. Even those who visit the battlefields of 1864 are astonished to find how short all the distances are, and how closely the several features detailed in the accounts are adjoining. From friend to foe at Missunde, Oberselk, and Oeversee, it seems, according to our notions, a mere stone's throw. The visitor to Waterloo and Hochkirch will be still more impressed by this. The dispersed order of battle was then yet unknown. Thus the possibility of unexpected clashing on the part of subordinates was more limited. An army formerly advanced, before the battle, to within a distance of the enemy at which we should now stand in the most effective range. The general, before making his decision and completing his dispositions, could personally examine the condition of affairs. Frederick severely reproached himself for not having made a personal reconnaissance of all the ground over which his attack led him at Kolin. Whoever would do that in modern wars, would always be behindhand with his arrangements. Frederick and Napoleon followed the movements of all their troops until the moment arrived for them to engage in the battle. But the great King was, as a rule, only at the head of 30,000 to

50,000 men, and although Napoleon commanded vast hosts, they were closely packed together in dense columns.

In these days it is seldom possible to find a position whence the whole battlefield could be surveyed. At all events, the field is too extensive for personal direction of the troops on either flank. The orders carried by a swift horseman often take so much time in transit, that the circumstances under which they were issued have, in the meantime, completely changed. Intelligence and messages from distant parts of the battlefield are not always clear, sometimes contradictory. Hence the general must act, so to say, on hearsay, which demands greater courage of responsibility than was required fifty or a hundred years ago, and only a strong self-conscious mind will thus be equal to the task.

The truest friend and promoter of strength of will is ambition. Healthy ambition is indispensable to a general. Men of very strong will and great qualities remain sometimes unknown, because they lack the inner impulse to shine forth, to be the first, and to "outstrip others." Some have been only induced, almost forced, by chance events to disclose their talents, Cromwell and Washington being examples of this. Ambition, however, has wrongly become discredited, because it is so frequently confused with that form of activity which strives after external advantage, and is thus falsely styled ambition. Genuine ambition is an expression of the natural desire, innate in every man, to prolong his existence beyond the pale of death, to snatch an immortal part of his existence from annihilation. Without this active help, the will, even though it assert itself energetically at first, is readily exposed to the danger of gradual extinction. It is easy to understand how men of talent, after showing at first great promise, disappear afterwards in the gloom of obscurity. We must not, in such cases, always assume that their talents were exhausted. Either a faulty philosophy taught them in process of time to scorn glory and greatness, or they allowed their eagerness for fresh laurels to be destroyed by the envy of their companions-in-arms, or, it may be, by the charmless-

ness of easy successes. But this is prevented by an intense ambition, which keeps the will in motion like the flywheel of a machine. Great deeds are impossible without ambition. It is nearest allied to love of glory, which unceasingly prompts us to rescue our name from historical oblivion, and, with that object in view, to accomplish extraordinary achievements. Love of glory was Frederick's mainspring when he marched out to conquer Silesia, and to open a new line of development to his Fatherland.

The general undergoes his hardest trials in the days of disaster. He must possess the special gift of being able to bear disappointments and the buffetings of fate, of whatever sort they may be. There are characters, vigorous in other respects, which lose their tranquillity, their presence of mind, and their patience upon their hopes being dashed to the ground. We characterise that quality which is especially successful in combating the depressing influences of misfortune, as "greatness of soul," and attribute this quality to our ideal of a general.

Thus it follows that a number of great qualities, purely human, are also identical with great military qualities. Among the other gifts indispensable to a general, it appears only necessary for us to bring into prominence those about which something special remains to be said. For, we must take it at the outset to be self-understood that he cannot exist without circumspection, courage, boldness, enterprise, foresight, discernment, perseverance, &c., since every good soldier must possess these qualities.

A thorough knowledge of the secrets of human nature is very essential to a general. An army is a very sensitive body, not a lifeless instrument, or a set of chessmen to be moved backwards and forwards, according to calculation, until the enemy is check-mated. An army is subject to many psychological influences, and its value varies according to its general feeling. Disaster depresses its courage and its confidence; any advantage, though trivial in itself, animates its hopes and strengthens its discipline. The same troops are

not to be recognised at different times, so differently do they comport themselves. Influences very keenly felt at one time, at another pass by without notice whatever. How often has it not been said, that orders and counter-orders, marches and counter-marches, without any apparent object in view, or even night-operations, are sure to disorganise the best army in the world? Now an army has seldom been led backwards and forwards, marched during the night, halted, ordered and changed about, more often than the army corps of General v. Werder, from the 1st to the 10th January, 1871, and yet there was no trace of disorganisation. This instance proved the serene confidence of the soldiers in their leaders. The men felt instinctively that they were in good hands, in spite of all apparent vacillation, and that there was no reason to lose confidence. It does not signify so much what demands are made, as how and by whom they are made. All rules that could be laid down on this subject are futile. The general must understand how to look into the hearts of his soldiers, in order to estimate rightly what may be required of them at a given moment. He must be a judge of human nature. Scharnhorst long since bewailed the fact that the psychological side of the science of warfare is so little known, and "that the chief use of history—the difficult and yet so profitable knowledge of the human heart, which is attained by nothing more readily than by the investigation of events, themselves a consequence of great and far-seeing plans—is almost totally lost." Modern military history, even more than the old, breaks away from a discussion of the psychological element. It is content, in a concise style, which reminds us of the simplicity of form of antique architecture, to record facts or to make critical deductions, without describing the ground colour of the completed picture. Thus it comes to pass that many soldiers, excellent in other respects, err in the direction of either, judging by their own unwearying energy, overtaxing their troops, or, by putting too low an estimate upon the power of their personal influence, of demanding less of their soldiers than they are capable of

performing. Hackneyed dicta as to the sparing of troops in war finally lead to bad habits, which, once firmly rooted, become a power like the "spirit of the Prussian army" of 1806, which did not permit of living on the country or of lying down in the face of the enemy's fire.*

Since every nation and every army must be employed and led according to its characteristics and its own particular condition, the general in each separate case will require some special qualities in a particular degree. Though the character of leaders be always of a practically uniform type, special cases will require different features of the general's character to be cultivated in an exceptionally high degree. The ardour that fires the Southerner to martial deeds is incomprehensible to the soldier from the North, while the calm firmness distinguishing the latter will scarcely appeal to the former. It is knowing his people and his army that guides the general into the right path. His knowledge of men readily suggests to him the means most likely to further his designs, and assists him in assigning to his subordinate commanders the tasks most suited to their powers and temperament. In this way much is already gained. Fully one half of all the conditions of success consists in finding the proper persons for the execution of plans. Deficiency in certain qualities in a commander-in-chief may be compensated by corresponding excellence in subordinates, and the qualities which the general does possess may be doubled in effect.

A less appreciated, but yet indispensable, quality in a commander is imagination, the step-child of our modern method of training. It flashes before the eyes of the young man pictures of glory and greatness, and fires him to emulation.

* We must not, in this place, fail to point out a danger lurking in the war game and in the staff tours. In these exercises, which in other respects are rightly valued as highly conducive to efficiency, as a rule only an average amount of work is assumed, in order that both sides may act under equal conditions. By this means we become accustomed to regard average performances as the only possible. But it is precisely the extraordinary performances to which, in war, great successes—nay, success even in any sense—must be attributed.

Yet that is not its highest sphere of usefulness. A too lively imagination may even lead to an over-estimate of one's own power and to the taking of false steps. But, for other purposes, it is most essential to a general. He must be able to clearly picture to himself, at any moment during long and intricate marches and operations, the position of his own troops and the probable situation of those of the enemy. And more than this, he must foresee the situation as it will be at the expiration of two, three, or even more days. Jomini extols this quality in Napoleon, and attributes to it the rapidity and ease of all his arrangements. The positions of his corps, divisions, and brigades at any given moment were always present to his mind. He therefore forgot nothing, and never failed to notice chance means to the end in view; he thought of things which every one else would have forgotten, and was rich in inspirations. Such is principally the work of imagination. It is of assistance, also, in the study of military history, which should meet it in a more attractive form than it is generally clothed in. It paints in the small details and facilitates a harvest of experiences being gathered which are, perhaps, merely hinted at in the historical narratives. An ill-controlled imagination, which has not been compensated by a careful study of history, is certainly open to suspicion of liability of depicting fantastic dangers. But in anxious minds the same apprehensions are frequently due to a sheer want of imagination, and thence spring a thousand doubts, bringing wrong orders in their train. The enemy is supposed in a place where, if his last position and the time since elapsed were taken into consideration, he could not possibly be expected to be. Useless precautions are taken where other divisions of the army, if the situation were only properly grasped, must already have adopted them. The fatal splitting up of forces, also, is frequently due to deficient power of imagination. Imagination simplifies the interpretation of the commands and dispositions of superiors; it aids us materially in finding our way over unknown ground, because it presents the actual

map clearly to our mind, and facilitates recognition of the actual features. Finally, it aids us more than we realise in the conversion of theory into practice.

If there were always time for computation in war, one might perhaps be able to dispense with imagination, and make one's dispositions on the map, compass in hand. But in the heat and excitement of battle we lack both the leisure and the calm requisite for solving such geometrical problems. The power of imagination must know how to conjure up a picture that shall serve us as a basis for subsequent action; and in order to prevent distortions and dislocations, the commander must not fail to exercise his fancy and to keep it working.

As a rule, the importance to a general of a good memory is under-estimated.

Napoleon compared a man full of genius, but without a memory, to a fine house without furniture, and to a stronghold without a garrison. War is a perpetual struggle with embarrassments which the enemy either causes us or attempts to cause us. Our object, therefore, must be to discover means to help ourselves out of every strait, and, in this our endeavour, the recollection of similar situations in former times, and even of instances recorded in military history, is of extraordinary assistance. Even the most inventive brain would fail, if a good memory did not afford it effectual aid. The latter alone enables us to profit by our experience. Moreover, war demands great care in numerous details, trivial in themselves, but upon which the wellbeing of the troops depends. The headquarter staff is continually called upon to solve problems of the most varied kind, from directing a straggler to his corps to questions affecting the lives of hundreds of thousands. Every item must be disposed of in a businesslike and expeditious manner, which requires a most excellent memory. Memory, moreover, is not by any means a uniform faculty. Its objects are names, persons, facts, numbers, &c. Next to the historical and geographical memory, that for persons appears to be the most useful to a

general, since it enables him to bring the right persons into the right places.

One of the most important talents of a general we would call that of a "creative mind"; because to term it "inventive faculty" appears to us too shallow. There are but few men who have original thoughts. Ben Akiba's saying, "Nothing new under the sun!" is as true of the world of ideas as that of phenomena. Most people in these days only make use of what they have inherited or acquired. But in war situations are of such a nature that they appear similar without ever being quite the same. The number of causes and forces is too great to admit of absolute similarity. The general cannot, accordingly, employ the exact means that have been already adopted on a previous occasion. At any rate, there will be something entirely new in the manner of their application. Some slight addition of personal invention is always necessary, and that requires the aid of the ever productive power of the creative mind, as well as the will to employ it.

This stimulates us and enables us to depart from the beaten track and enjoy freedom of movement. By this alone the general gains a great advantage over an opponent who lacks this gift. He will continually *surprise* him.

Now, if will power, ambition, and a love of fame are combined with creative power, the result is an irresistible spirit of enterprise, and it is rightly asserted, that of two generals who are in other respects equal, the most energetic must gain the day. This love of action was the secret of the fame of Alexander, who has been aptly compared by a writer to a man travelling in arms, who was always full of impatience, fearing that he might be delayed.

The mention of this love of action leads us yet further. It makes great claims upon our energies, not only the intellectual, but also the physical. Good health and a robust constitution are invaluable to a general. There have, it is true, been famous generals who were sickly, but that only proves the extraordinary vitality of their spirit, and that

they would have been able to achieve much more, had not a part of their energy been devoted to the suppression of their bodily ailments. Torstenson commanded his army from a palanquin, and conducted brilliant campaigns. But we also know that disease at last overcame him, and that he was obliged, when little over forty years of age, to take leave of his army and his victories, to retire to a sick-bed on his estates. Gout made Sweden the poorer by one great general and a series of successful campaigns.

Nature demands her due. In a sick body, the mind cannot possibly remain permanently fresh and clear. It is shunted by the selfish body from the great things to which it should be entirely devoted.

At the present time, when, with the exception of a few favoured on account of high birth, men are allowed to become old before being called upon to act in an influential position, good health is doubly and trebly indispensable to leaders. Their duties, especially in the German army, are very exacting; and only a very tough constitution can hold out long enough to ascend to the highest steps of the military ladder.

That a prosperous material position facilitates and does not impede the advancement of an aspiring commander, follows from what has already been said about officers generally. Such a position gives self-confidence and a feeling of independence, and, when used prudently, helps to maintain physical freshness and health. Riches are only dangerous to men of mediocre stamp.

Bravery, too, deserves a few words of explanation, although it must naturally be assumed in the case of every soldier. A general needs a special kind of bravery. It is said now-a-days, and with a certain show of reason, that all the world is brave, and that this quality is nothing so uncommon that great expectations should be based upon it. "But to assert that everybody is brave, is equivalent to declaring that everybody is a painter, a musician, or a mathematician."

The gods and heroes of antiquity had no scruple to fleeing

in battle from one stronger than themselves, and they were not even, on this account, excluded from the Olympian banquet. Our modern conception of courage, according to which the warrior is bound to defy even danger to which he thinks he must succumb, is deeply rooted in the ethics of Christianity and in our ideas of self-denial and self-sacrifice, which require of us to esteem our own life as nothing at duty's call. In this sense the soldier who has never before set foot on a ship swears to be faithful on water as on land, although fully conscious of his helplessness on that element. The high idea of faithfulness to duty, which is implanted in us by training, induces at last even the timid man to show himself brave and to suppress his fear of death and danger. The numerous examples of such devotion all around him carry him onward in spite of himself. The fear of being despised by his companions in arms as a miserable coward, is in the end greater than his fear of death.

But it is not this kind of bravery, acquired by training, that can avail the general. He requires that innate courage which is a rare quality of great men, and which serves its possessor without his being conscious of it.

Sense of honour and *amour-propre* keep most men firm in the face of peril, and externally, at all events, there will scarcely be any difference between them and those in whom courage springs from a stout and noble heart. But the former are pre-occupied with themselves, with their courage, and with their bearing, and a great part of their moral power is absorbed in self. Their usual lucidity will be found wanting, the beams of their mental activity will fall in extraordinarily thick rays, and, perhaps to their own astonishment, they will find themselves unequal to their task. Innate courage does not need an artificial stimulus in order to maintain itself; to it contempt of death is a thing so natural, that it does not absorb any of the other intellectual and moral qualities, but, on the contrary, brings them all more actively into play, as the excitement of the moment only augments the internal pressure which intensifies all power.

And so we admire, in illustrious soldiers, that they always become more clear-sighted and resourceful in moments of the greatest danger, while all around them are working with blunted senses. Only courage of a kind incapable of understanding how it is possible not to have courage singles out the true soldier among his fellows. It is such courage as Shakespeare attributes to Cæsar when he puts into his mouth the following words:

> Of all the wonders that I yet have heard,
> It seems to me most strange that men should fear;
> Seeing that death, a necessary end,
> Will come, when it will come.

From the great number of conditions, all of them difficult to fulfil, it follows that perfect generals are a rarity, a fact which has never been gainsaid. Frederick described the perfect general as "an *être de raison*, a platonic republic, the *centrum gravitatis* of philosophers, the stone of wisdom of the alchemists, a work of creation meriting our greatest admiration." Timur's *Institutes* enumerate nobility of birth, wedded to that of the soul, intelligence, cunning and boldness, bravery and prudence, determination and foresight, perseverance and deep reflection, as indispensable qualities. When Onosander only required of his general that he should be continent, sober, saving, industrious, of a clear understanding, high-minded, and of middle age, eloquent, a father of a family, and, if possible, of good descent, he had before his eyes an excellent average general, but not an Alexander or a Cæsar, a Frederick or a Napoleon.

It is difficult to find the mean among all these various conflicting qualities. Such were a gift that only nature, in the highest of good humour, would bestow.

Now it would seem as though these great generals, in whom so much excellence is combined, must necessarily also be the best of men, and take our hearts at once by storm. But neither of Frederick, nor yet of Napoleon, could this be asserted by those who came into personal contact with either.

As to Frederick, let any one read Kaltenborn's letters,* in order to convince himself that he was a difficult person to get on with. The ordinary explanation, that where there is much light there must also be much shadow, cannot satisfy us in this respect. More exact investigation will show us that the general (and in these modern times this is more true than ever) needs certain qualities which are neither grand, humanly speaking, nor are such as would be pardoned in ordinary mortals, unless they made up for them by other grand traits of character.

Strength of will can seldom be exerted without austerity. In modern war, immediately before and after decisive battles, such great masses of men are huddled together that through this cause alone abundance of distress and misery must result. And what will be the aspect of the battle-fields upon which hundreds of thousands have fought? They will present scenes of every form of human misery. Theoretical conviction that all is necessary and unavoidable cannot help us over the impression caused by the sight of so much suffering. It frequently happens that those are most deeply affected who before, owing to a secret consciousness of weakness, had shown themselves most regardless, and who, to judge by their language, were ready to wade knee-deep in blood.

Here again special qualities afford the only protection, one being severity, closely akin, it seems, to that lofty bearing which every general must display. We often speak of the contempt for mankind of great generals. This, however, needs explanation. We mean by it a feeling of indifference to the fate of individuals, which is only displayed on occasions when great aims are in question. In private life both Frederick and Napoleon had their soft moments.

But the great ends to be attained are not always clear to the masses. They vanish from their minds immediately they are engrossed by their own personal affairs, and thus it happens that necessary severity on the part of the general is

* Letters of an old Prussian officer, describing certain traits of Frederick II.'s character. Hohenzollern, 1790. (In German.)

interpreted as mere coldness of heart, repulsive to human feeling. The commander who, moved by pity, shows his sympathy for the wounded, or possibly allows himself to be detained by compassion at the scenes of misery, runs the risk of wasting the most valuable moments for action. And yet we start back in repugnance from the man who merely scans the decimated and exhausted battalions, in order to calculate what can still be demanded of them.

Inexorability and that seemingly hideous callousness are among the attributes necessary to him who would achieve great things in war. In the case of the general there is only one crime for which history never pardons him, and that is—defeat. A strong character will continually bear this in mind, and thus being less liable to be moved by the displeasure of those around him, his severity will appear even more pronounced.

Not only human, but intellectual imperfections also, strike us in generals of the first rank. Shakespeare's words on fearlessness point to a *tendency to fatalism*. This was peculiar to most heroes, and appears to betray a narrowness of soul, which in their case, however, is perfectly explicable. Experience teaches them to recognise the power born of the co-operation of small causes which a man can neither foresee nor control; hence the belief in a fate that, in each individual case, declares either for victory or defeat. This seems, however, to be contradicted by the fact that all heroes, from Alexander to Napoleon, were filled with a belief in their mission, which gave them, in the most difficult situations, an unshakable sense of security. But at the bottom of it all lies the conviction that fortune, in the long run, only remains constant to the deserving, and that chance, ruling with the freedom of divinity—"*Sa sacré Majesté le hazard*," as Frederick called it—declares quite as often for us as against us. Hence great generals owed what we call "belief in their mission" not to the favour of fortune, but really to faith in their own ability.

We have now learned to understand and forgive a certain

degree of severity, and to regard apparent imperfections of character in their true light. But there remain to be dealt with certain features in the character of a great soldier which bear an ugly look, though the exigencies of our time make them none the less absolutely necessary.

Even an Alexander or a Cæsar, if he entered our army to-day, would have to pass through all the intermediate grades from second lieutenant up to commander-in chief, before being able to make full use of his natural military talents.

There are on the long journey of life many rocks to be rounded, both those incidental to ordinary life and those peculiar to military service, on which open and magnanimous natures particularly are apt to be wrecked. Generosity and the spirit of comradeship have often been disastrous to light purses. Faithful devotion has implicated many in the fate of a superior or a friend. Excellent officers have had to forfeit their career, because they could not help feeling sympathy for subordinates suffering injustice, and thus involved themselves in their fall.

In order to escape these perils, it is necessary to observe discreet aloofness, and to shut oneself off from the bulk of one's fellows. We thus arrive at a point to see the usefulness of a quality which, when speaking of officers as a body, we were obliged to reject as being the most objectionable of all, namely, egotism. It is, however, impossible to escape from it; for it is a fact that no one has ever accomplished anything great in the world without a certain amount of egotism. Still, we should draw a distinct line between the ordinary mortal and those few privileged individuals whom Providence has predestined to greatness. In the case of the former, egotism is nothing more nor less than a predilection for miserable self; in case of the latter, on the other hand, egotism is a designed husbanding of strength in anticipation of coming opportunities, when it shall be displayed all the less reservedly for the benefit of the world. It must not be prematurely frittered away on lesser objects. A certain indifference to all the trivial daily excitements of the world

is most helpful to great natures in preserving themselves from premature exhaustion. But as this quality is not an amiable one, it is explained why heroic historical personages, particularly those of modern times, were but seldom popular among the playmates of their youth. They were always accused of being cold and calculating persons.

It cannot be denied that cool reserve, whether conscious or instinctive, impresses on the character in process of time a trait of genuine selfishness. Hence, possibly, the ugly greed of filthy lucre, so often seen in great generals and statesmen, so that, whilst the mob applauds its idols and attributes to them all good qualities in addition to their distinguishing great ones, the more initiated shrug their shoulders in pity at such credulous guilelessness. In reality, there is at work the very same quality by which greatness was made possible. Perfectly unselfish natures are sure to fall a prey to some misadventure on the long climb up the hierarchical ladder. Of such we wish, as already said, to have right many in our circle of comrades, since, after all, only a limited number can reach the highest rung.

There have, it is true, been exceptions—splendid men who, never sparing themselves, yet were never exhausted—but they are a rarity even among the great.

With great commanders, enthusiasm for their historical aims will always be blended with love for the glory of their own name; so much so, that both are inseparable. This itself gives an appearance of selfishness, to which King Frederick gave the proudest expression in writing to his minister Podewils, shortly before the crowning victory of Hohenfriedberg: "It is my ambition to have contributed more than any other to the greatness of my house, and to have played a great *rôle* among the crowned heads of Europe. *To keep myself to this purpose, is almost a personal duty which I shall fulfil at the risk of my happiness and my life. I have no other choice: I will assert my power, or may it perish, and the name of Prussia be buried with me!*" Without Frederick's greatness, no Prussian greatness!—thus thought the hero-

king, and in our admiration of the feeling that animated him in writing these words, we freely grant pardon to all heroes for their noble egotism.

Since historical investigation teaches us that famous soldiers were not exclusively distinguished by fine and endearing human qualities, but that sundry other traits of character, objectionable in ordinary life, were essential to them, it follows that such coarser qualities must be disregarded where the advancement of gifted young soldiers is in question.

The principle that no one is indispensable, and that the army will continue, even if the best men left it, is certainly an excellent one, but it must not lead to the elimination of able men merely because they have a number of unpleasant qualities. The French Colonel Desprels proved, in a thoughtful historical treatise, that the souls of great heroes of the past contained, almost without exception, a disposition to harshness, mistrust, jealousy, imperiousness, selfishness, restlessness, &c., and that, according to the ordinary peace-standard of the present day, they would have had little prospect of being among the elect. A penchant to promote instead those of agreeable manners is very apt to grow. Indulgence in respect of all such traits of character as do not prejudice efficiency is accordingly essential if an army is to be well led. It is a fact that in later years the most famous generals were evolved from the class of troublesome subordinates and abrupt and reserved comrades.

There are, of course, certain human virtues which we cannot afford to dispense with in view of the social standing of the corps of officers as a whole; but, the utmost possible tolerance must also be extended in favour of an able man who compensates for personal defects by exceptional ability.

There is no other way of rapidly raising men of great promise from the lower grades without disorganising an army. A deliberate search for generals has only resulted in the choice of such as Mack and Massenbach, and it was

merely by a lucky chance that a Rüchel was discovered by this method. It is much safer to leave the roads open to men of strong character, and, when found, to give them freedom of action.

Many of the breakers of military life are naturally avoided by those born in high places. Princes of royal blood escape difficulties which would wreck the career of an officer of humbler origin. The disfavour of superiors, the jealousy of comrades, petty conflicts with the conditions of civil life, and the difficulty of becoming known to persons of influence, have ended many a promising career. Noble parentage helps to overcome all these difficulties, and is indeed a priceless christening present for a man of ambition and genius. It breeds in early life the habit of command, accustoms to dealing with important affairs, and promotes ready acceptance of responsibility. Accelerated promotion places a prince's son in youthful years into high offices, otherwise usually filled by older men, although the duties may demand youthful vigour. No wonder then that, in modern times, princely houses should have supplied the largest contribution to the galaxy of famous soldiers. Gustavus Adolphus, Bernhard von Weimar, Frederick William, the victor of Fehrbellin, Condé, Turenne, Eugène, Charles XII., and Frederick, all of whom were already seated on thrones, or stood near to them. Only the leaders of the first French Republic emerged mainly from the obscurity of humble origin. Napoleon was the scion of a noble Corsican family. It is obvious that the great responsibility which command entails can, in these days, when people and army are one, be best undertaken by the Sovereign himself. For that reason that nation will be most secure whose rulers are also its military commanders, and whose royal house knows how to maintain the will and the vocation for the arduous duties of supreme command.

2. Head-quarters and Chain of Command.

"The constitution of the head-quarters of an army is of an importance not always sufficiently recognised. There are military leaders who do not need advisers, and who consider and determine everything themselves, leaving the execution of their orders to their staff. But these are stars of the first magnitude, not met with in every century.

"In the majority of cases the leader of an army will not desire to dispense with counsel, which latter may be the result of the joint deliberation of a small or large number of men whose education and experience pre-eminently qualify them to arrive at a correct judgment. Such counsel must, however, agree to a single proposition, to do which, its military hierarchical character must come to the aid of subordination, even a subordination of thought. The single opinion agreed to must be submitted for the Commander-in-Chief's consideration by a spokesman of his own selection, the choice being based, less on considerations of rank, than on complete personal confidence. Even if the advice given is not in every case absolutely the best, it may, provided subsequent action is logical and consistent, nevertheless lead to satisfactory results. The Commander-in-Chief's merit is, in any case, infinitely greater than that of the counsellor, in that he has taken upon himself the whole responsibility for action.

"But, on the other hand, if a general be surrounded with a number of men, each independent of the other—and the greater the number, the more distinguished and the cleverer they are, the worse the case is,—and if he listen now to the advice of one, then to that of another; if he carry one measure, practical in itself, up to a certain point, then deal with another still more practical in another way; if thereupon he listen to the well-founded objections of a third, and to remedial proposals made by a fourth, we are prepared to wager a hundred to one that in spite of all these, no doubt well-meant, measures, he will lose his campaign.

"There are in every head-quarters certain persons thoroughly versed in accentuating difficulties, whatever operations be proposed. At the first complication they prove conclusively that they had foreseen all that would happen. They are always in the right, because not caring themselves to propose anything definite, and still less to act, they can never be refuted by results. These gentlemen of negation are the ruin of commanders.

"But most unfortunate of all is the general who is controlled by a person attached, to whom he has to give daily and hourly information as to his schemes, plans, and intentions. A delegate from the central authorities at head-quarters, or at all events a telegraph wire at his back, these are the ruin of all independence, of all prompt action, and of every bold venture, without which war cannot possibly be waged." *

This warning has special reference to the Austrian head-quarters in the year 1859.

It is, however, not necessary for us to search foreign military history in order to study the unhappy constitution of a head-quarters. Our own furnishes us, unfortunately, with a perfect example. In the year 1806 the composition of the head-quarters of our army was such as to render efficient command almost impossible. Clausewitz speaks jestingly of a Congress convoked to lead the army, and appearances certainly bore out his words. The Duke of Brunswick in theory commanded the whole forces, but the command of a separate portion of the army, the so-called main army, was also entrusted to him. † Prince Hohenlohe, at the head of another great division, was on a footing of

* "The Italian Campaign of 1859," edited by the Historical Section of the General Staff of the Royal Prussian Army. (In German.)

† In 1757 something similar happened, when King Frederick directed all four columns of the army advancing into Bohemia, as commander-in-chief, and in addition commanded the division marching from Dresden. But a Frederick, who was sure of his authority under all circumstances, could allow himself to do such things, but not a Charles William Ferdinand of Brunswick, especially when he had a Hohenlohe under him, and was, besides, himself in a position of dependence.

neither equality nor subordination. His reputation as a General was almost as high as that of the Duke; in the army he was, in fact, sometimes thought the better man. He conceived himself bound, for the good of the country, to play an independent *rôle*, and to attract much influence to himself. His quartermaster-general Massenbach encouraged him in this opinion. Rüchel's case was similar. For both of these men separate armies had been formed in order to satisfy their supposed just pretensions. But the King also was with the chief army, commanded by the Duke. The King had really only come in order to stimulate by his presence the energy and the rapid execution of all measures, although his influence naturally extended further, for the Duke, before taking decisive steps, proceeded to hold councils of war, at which the monarch was present. The King was attended by Phull, the senior officer in the general staff, and virtually its chief, since the nominal chief, Geusau, entirely absorbed in administrative duties, did not concern himself with the command. Field-marshal Möllendorf was also with the King, for though, owing to his eighty-two years, it was not proposed to give him active employment, * it was believed that the benefit of his experience was needed. Similarly Zastrow, in whom Frederick William III. had since earlier times felt special confidence, was summoned to the royal head-quarters. Colonel Kleist, the adjutant-general, was attached to it, owing to his influential position. A subordinate *rôle* was played by Kalckreuth, who commanded the reserves of the main army, and always attended the persons of the King and the Duke. Diplomatists, too, took part in deliberations and decisions. In these conferences Scharnhorst was the only one who took the part of the Duke, whose chief of staff he was. Junior in rank to Phull, even to Massenbach, and new to the army, he had not the gift of making his personal influence felt at once. The side of the actual commander-in-chief was accordingly, even in point of numbers, doomed to play an inferior part throughout; the

* In 1805 he had still held command of a reserve corps.

King's personal adherents giving the casting vote. Instead of leading, the Duke was being led, and this, says Clausewitz, he suffered complacently.

In the council there was no lack of able men and highly-educated, excellent soldiers. Some of them—Scharnhorst, Kleist, and, we may add, Phull also—subsequently attained great historical renown. Their joint achievement in this instance was, however, worse than nothing—in short, the acme of confusion and indecision.

The cause of this unfortunate condition in the supreme command was exclusively due to the creation of commands and staffs in deference to the personal claims of the leading personages. Unfortunately, considerations of this kind, in the absence of a strong man at the head, are apt to make themselves felt in even the most momentous questions. Clausewitz, who served in that campaign as a staff-captain of twenty-six years, and as adjutant of Prince August, saw very clearly, in spite of his youth and his modest position, how matters stood.

"With what difficulties Scharnhorst has to contend is scarcely credible," he wrote to the Countess Marie Brühl, on September 29, "yet one gets some idea of it when one knows that there are three field-marshals and two quarter-master-generals with the army, where properly there should be only one field-marshal and one quartermaster-general. I have never in my life met a man more qualified to overcome difficulties of that kind than the man to whom I refer; but how much of the effect of his talent is not lost by contact with so many conventional impediments, and by the crippling effect of continual clashing of outside opinions! *So much is certain, that an unlucky issue, should such come upon us, will be solely attributable to these petty conventional considerations, for, in every other respect, this moment is a very enviable one for the King of Prussia.*"

Now, when, in the further course of this book, head-quarters are spoken of, we must carefully distinguish between the *great general headquarters*, which have the control

of all the armies in the field, and the *headquarters* of each separate army, which, in German official language, are described as "*Armee Ober-Kommandos.*" In reality, both are essentially the same, and what is said of the one will, as a rule, apply to the other. I shall, therefore, for the purposes of this work, ignore any distinction, and shall only point out differences where necessary.

The proper constitution of the headquarters, especially harmony between the commander-in-chief and the chief of his staff, can do much towards supplying the want of the heaven-born military genius mentioned in the preceding chapter. Definite rules on this point cannot be formulated.

A happy co-operation depends in the first place upon personal sympathy. In the absence of the latter, all theory leaves us in the lurch. The mutual complement of different natures is impossible in the absence of some common basis, and differences existing must be restricted to certain gifts and aspirations. The chief of the general staff is differently situated in relation to the headquarters than the commander-in-chief. He has the choice of a number of persons from whom to select those most suited for his purpose, as well as being acceptable to him in personal intercourse. The commander-in-chief, on the other hand, is dependent upon the person of the chief of the general staff, and cannot put him on one side without producing confusion. A happy selection in the first instance is, therefore, of supreme importance. Bad relations between these two men must produce the worst possible effect upon the fortunes of the whole army. The public will seldom hear anything of the matter, and the cause of failure will be looked for elsewhere than at its real source. The internal relations of the staff are seldom laid bare, unless great disasters are followed by polemical writings or the investigations of courts-martial. We are at once reminded of Bazaine and the chief of his staff, Jarras, whose want of agreement has been disclosed to us by the trial of the marshal. Their previous relations had been good. But Jarras, while the Emperor himself held the

supreme command, that is, from the commencement of the war until the afternoon of August 12, 1870, filled the position of a second chief of the general staff, under Lebœuf. Hence, when assigned to him by the Emperor as chief of his staff, Bazaine regarded him as an inconvenient spy, whose duty it was to criticise his actions, rather than to second his efforts, besides which, General Jarras had been left without any information as to the general situation of the army. This latter circumstance rendered it difficult for him to be at once of real assistance to the Marshal.

Bazaine, therefore, kept him at a distance from the affairs of the command, assigned to him a purely passive *rôle*, and regarded him as really nothing more than a secretary of high rank. The consequences soon became apparent. On August 12, the Marshal resolved to march away with his army from Metz to Verdun, to avoid being shut in. The design was correct, but the method of execution was the most deplorable imaginable. Bazaine himself had given orders for the march by Mars-la-Tour and Etain to Verdun. It thus happened that, whilst four roads might easily have been utilised, the whole army, with its cumbersome baggage, was placed upon the single road leading from Metz to Gravelotte, and was blocked up for days in the narrow valley of the Moselle. If the independent action of individual subordinate commanders had not afforded some relief, the confusion would have been still greater, and it would have been utterly impossible, even by August 16, to deploy the army for battle. "At a moment when the question of hours might decide the fate of France, the most elementary measures of precaution were neglected." * Bazaine threw the blame upon the chief of the general staff, who, on his part, declared that he had not heard anything about the whole movement until it began to be carried into execution. Which of the two is right, and which is wrong: whether or no Bazaine purposely failed to consult Jarras, or whether Jarras rashly felt himself offended, and held back at

* Words from the act of indictment of the Marshal.

the wrong time, is certainly hard to determine. The mutual relation of the two was, in any case, a false one. Neither of them ought to have tolerated it; for it certainly contributed, in no slight degree, to the destruction of the army—and the army paid the penalty.

The modern commander can no longer be all in all. Even a high genius will require independent and trained assistance, how much more then must a commander who is not a star of the first magnitude be in need of counsel and assistance! The exercise of the command of an army has become too great a task for one single individual. Besides, there are questions of a technical nature which require special knowledge to deal with them.

For psychological reasons, again, intimate relations between the general and the chief of his staff are no less essential A general will always suffer limitation by a sense of responsibility, and his freedom of judgment is apt to be imperilled by the same cause. It is, therefore, advisable to supply him, so to say, with a second mind, which, free from this strain, will find it easier to preserve its complete objectivity and freedom of thought. A balance of sentiment will establish itself between the two minds, and anything resulting from purely personal feeling will be eliminated in the process of arriving at a decision. Mutual intercourse must, however, be on a footing of perfect mutual confidence.

The commander-in-chief, even when he is not the supreme head of the whole forces, should, accordingly, be allowed, as already urged, to appoint the chief of the general staff himself. He ought to be assured that during the most important period of his life he will not be tied to a person towards whom he has an antipathy. How much will not his action depend upon his state of mind! and this again is, in great measure, influenced by the nature of his relations with the man with whom he must work together daily and hourly for the solution of the most serious problems.

The proper functions of a chief of the general staff are not regulated by rule, and do not lend themselves to strict defini-

tion. Individual condition, abilities, and personal bent must decide all. Frederick and even Napoleon were virtually their own chiefs of the staff; and yet the former missed Winterfield, and the latter Berthier, when obliged to do without them.

Napoleon dictated to one of his adjutants definite instructions for the major-general in the form of a letter. "My cousin! Order General S—— to collect at E—— artillery captured from the enemy; order the quartermaster-general to move all the magazines to the same place; order Marshal M—— to occupy the neighbourhood of F—— with a strong force; have a large hospital erected there," &c.

Various instructions, thus concisely stated, were embodied by Berthier in separate orders with the addition of necessary details, and despatched to their several destinations. Napoleon's memory was excellent for facts and localities, but was weak for proper names. This we have not merely on the testimony of Bourrienne, but the Emperor's letters themselves betray it. Very frequently we meet with passages such as these: "The general who commands in W—— will proceed to E——, in order to take over the command; the general who is now at K—— must draw closer to the army." And this occurs in passages which would lead to an absolute belief that the Emperor must have known previous to writing who the persons in question were. In this respect he was very incorrect, whereas in matters of fact, there was, as a rule, nothing wanting. Berthier's position was rather that of a chief of the Cabinet invested with high authority, than that of chief of the general staff.

King William, in 1870, allowed complete latitude to the chief of his general staff, General v. Moltke, in issuing orders regarding movements, decided on in personal consultation, to the several army head-quarters. Such orders, though bearing the signature of the chief of the general staff, were regarded as royal decrees.

The constitutional monarch of a modern civilised state, who is, even during the war, absorbed in the cares of government and harassed by questions of internal and external

policy, will be obliged to allow greater freedom of independent action to the chief of the general staff than a general who, like Napoleon, mounted a throne, and whose government is, strictly speaking, merely a military dictatorship.

Quite different again must be the state of things where one general in the army takes the place of the commander-in-chief, and another acts as the chief of the general staff. In this case both are able to devote their entire energy to the command of the army, and the scope of action of the chief of the general staff would naturally become somewhat restricted.

The one fact, however, remains, that the general must devote his best efforts to the resolution of the main questions, to subduing inevitable doubts, and to assuring absolute clearness of view. It is not wise to take upon himself too much of the details of execution, a fault to which small minds are very much inclined, in order thus to soothe their inward unrest. Employment certainly acts as a palliative in such cases, though men but imitate the ostrich, plunging into work, and forgetting over it the anxieties of the moment. A general may not resort to this expedient; otherwise he runs the risk of losing sight of important questions and becoming absorbed in petty trifles. If, after consultation with the chief of his staff, he has decidedly declared his will, and has agreed with the latter upon the general plan of operation, everything else, the carrying out of orders and the arrangement of the various details, had best be left in the hands of the staff. That commander-in-chief who insists upon the writing and revision of his own orders, robs his mind of the leisure necessary for the conception of fresh ideas. He ought to think, rather than wield the pen.*

With armies of great strength, the chief of the staff must

* The number of troops is certainly of moment. An intelligent and independent general at the head of an army consisting of only a few divisions may himself, if only to facilitate greater expedition, jot down on paper the few orders required. But in that case, he is, as a matter of fact, only a simple general, and commander-in-chief in name only. The remarks above refer principally to great armies of five or six army corps and several cavalry divisions, which now-a-days are considered the normal combination.

avoid giving too much time to paper work, since he ought at any moment to be at the disposal of the commander-in-chief, in case the latter needs his advice. The very necessity that work with the pen, once taken in hand, should proceed without interruption, demands that it should be left to some one not liable to be called away. It is doubtful praise for a chief of the general staff, if, in the ordinary sense of the word, he be called a great worker. He must, certainly, display untiring energy, but this should manifest itself in direction, rather than in personal work. Certain orders, especially important documents, directions for decisive movements or battles, will have to be written by him with his own hand. The same applies also to confidential correspondence with the great general staff and its chief. But of the ordinary routine work he must throw as much as possible upon other shoulders.

The twofold nature of his position naturally makes it sufficiently trying. Looking upward, he must be the counseller, friend, and confidant of the commander-in-chief, and, in the other direction, the organiser and director of a numerous staff, frequently composed of very heterogeneous elements.

If it be true that the energy of a commander-in-chief is, under certain circumstances, dependent upon his state of mind, this is equally true of the whole staff. Its chief gives, by his bearing, the tone to the whole body. If this tone is a happy one, replete with general contentment, and if all pull together in a spirit of good comradeship, the machine will work doubly reliably, quickly, and well. Dissension and bitterness are apt to enter a mixed collection of persons with the wrong man at the head, and may ruin all, even though some members of the body be of the best. In principle the headquarters of an army should be composed of the best men in that army. In the case of each individual officer employed on the staff, more than in that of others, it must therefore be beyond doubt that he is ready and willing to do his best.

Official brusqueness, too, is less justifiable now, and will avail less than formerly. The more friendly the official relations, the greater the prospect of everything working smoothly. It must also be remembered that a beam of light from the inner circle will invariably fall on the army without. Discord, or the opposite, in high places communicates itself to the troops, and exercises great influence on the efficiency of armies.

From the double position of the chief of the general staff it follows that the post requires a man not only of talent, but also of a certain personal charm, which gives him a natural influence over others. There are many people who, in the most friendly possible way, can exact work to the utmost capacity of their subordinates, and men of this stamp are pre-eminently qualified for the position of chief-of-staff. As there is no fixed rule defining the position of the commander of an army, so there is also not one regulating the functions of the individual members of the staff. The republican freedom thus created has great advantages. Where in time of peace no army corps organisation exists, the staff will be formed as required. Officers of the general staff and aides-de-camp are collected from every part of the country, and are often neither known to each other nor to their chief.

If individual duties were assigned beforehand, according to rank and seniority, such arrangement would, at first sight, certainly seem to have the advantage of simplicity. But this advantage is only a small one, since it does not compensate the grave disadvantage of it being more or less a matter of chance if the right person falls into the right place. Given a few days, colleagues become accustomed to each other, and each will gravitate towards the place most suited to his individuality. Little depends upon considerations of rank, but everything upon harmony.

It is necessary to relieve the chief of the staff, not merely of work, but also of a number of small cares incidental to the daily life of an army. Though, therefore, he ought to set

the general tone of the headquarters, his time ought not to be taken up with the settlement of every detail concerning a community of fifty, sixty, or seventy officers and officials.* He therefore needs a deputy, so that questions, disputes, and difficulties will not find their way up to himself.

Hence the necessity of having a deputy chief on the head-quarter staff. As such we regard the quartermaster-general, or the assistant quartermaster-general. The French army of the Rhine had, in 1870, in addition to the first-named, two additional major-generals, who shared these duties.

The quartermaster-general in the great head-quarters, and the assistant quartermaster-general in each separate army or army corps, can create for himself a wide sphere of usefulness; for there are innumerable matters, each of which by itself does not exactly decide the fate of an army, but a combination of which exercises a considerable influence upon it. Numberless questions of interior economy affecting the well-being of officers and soldiers occur daily, to deal with which neither the commander-in-chief nor the chief of his general staff will find time. All such matters fall within the province of the quartermaster-general. His instrument is the orders of the day, which, independent of the orders for the movements of troops, cover the whole range of the inner life of the army: personal matters, the transport of prisoners, sick and wounded, the posting of reserves and reinforcements, as well as the many detachments to be supplied, &c. It is also his special duty to keep all the wheels of the machine in uniform motion, and to regulate their working, as well as to exercise supreme control over the office work of the head-quarters.

The quartermaster-general, or an assistant quartermaster-general, will often be able to afford valuable assistance to the chief of the general staff whenever occasion arises to advise the commander-in-chief on certain points. Two capable men

* In the great head-quarters of all armies these numbers will increase five- and six-fold, and, in spite of all possible limitation of numbers, there will always be an enormous train of followers.

exercise greater power of persuasion than one, and will be less likely to become exhausted in argument. It must, however, be understood that the two must be one heart and soul, as otherwise mutual paralysation will be inevitable.

Proper regularity in the performance of the highly important office duties necessitates the assignment of a special officer to the duties of secretary, though it may not be necessary, or desirable, to describe him by that title. Very often as much depends on the correct and rapid distribution of orders as on their careful preparation. Wrong delivery, or an error, slight in itself, may often cause the greatest disasters and difficulties. A wrong address may cast one army corps into doubt, a second into confusion. Frequent occurrence of such errors, possibly the fault of subordinates, may undermine the confidence of the troops in their leaders. It will scarcely be feasible to force a man to perform such duties against his inclination, or to assign one who has no aptitude. Hence in this regard also considerations of rank must be waived, and a man selected purely for his fitness. There will be no lack of persons of a bureaucratic turn of mind, men with a fondness for a well-oiled office mechanism, and who take as much delight in the dexterous disposal of piles of paper work as the commander-in-chief in a battle won. It is, however, imperative to keep from an office, already invested with a certain outside and ostentatious importance, all swaggerers, who, for the sake of their own glorification, treat the merest trifles with undue seriousness, who in their pedantry neglect the essential, and in their trumpery spirit are a continual source of obstruction in matters of real importance. Quiet conscientiousness and discreet reserve are the qualities demanded.

We must not miss the present opportunity of uttering a word of warning against charlatanry in general. It is characteristic of the tribe of mountebanks that they know how to create difficulties in order to overcome them afterwards, and thus exemplify their adroitness. On closer analysis of their doings it will invariably be found, that with

them, contrary to appearance, the object itself stands for nothing, self for all, and that in reality their thoughts centre on the latter, not on the duty to be performed. Whenever superficiality and vacillation begin to reign at the head, they will generally gain the upper hand, displace existing influences for good, and accelerate general decay. They have, in fact, been the cause of ruin to many head-quarters and of many armies.

The general staff, which, according to the size of an army, generally consists of from four to six officers, is mainly responsible for orders relating to movements, quarters and combat; in a word, all orders relating to operations in the field.

A special art, which again demands special aptitude, consists in the drafting of orders,* which is not the business of everybody. Persons with the best ideas do not always understand how to express them clearly in writing. Proper sequence being of paramount importance, and as this demands good memory, responsibility for orders must be centred in a single individual. And as pressure of time will generally obtain, it will not even be possible to assist the experienced staff officer entrusted with this duty by previous preparation of details. In view of the probability of circumstances necessitating fresh dispositions at short notice, the officer in question must be ready for work at any moment, day or night, and such contingencies supply the crucial test of clearness of thought and expression, combined with general working capacity. Indefatigability must form a prominent qualification of this particular officer. He will naturally soon become the confidant of his chief, and in his selection it is profitable to give preference to a man holding natural sway over his comrades, so that his exceptional position may not create dissension.

* In this connection we naturally exclude the usual orders for the movement towards the theatre of war, which are of the stereotyped order, the only variation being in the names of places. These require no skill, and soon yield place to measures demanded by uncertainty in the situation during actual contact with the enemy, and by the prospect of impending battle.

The general staff must, next, control the intelligence department. Knowledge of the enemy's country, its language, and its military organisation, are special qualifications for this kind of staff work, to which may be added a certain detective instinct, difficult of exact definition. Application and cautious observation are generally of greater importance in the service of information than the gift of fathoming secret designs.

The written work of the general staff comprises reports and statements regarding military movements and the communications with the base at home by rail and wire ; also the necessary correspondence with the enemy, with the civil authorities of the country in which the war is being waged, and in connection with books and maps ; lastly, the keeping of an official diary of events.

Besides this it will have to collate reports of reconnaissances, receive information relative to its own forces, or those of the enemy, undertake the transmission of orders and oral instructions, elucidate misunderstandings, and superintend the execution of all orders.

The adjutant's department of the staff of an army is charged with personal matters, such as promotion, requests, the grant of decorations, the preparation of casualty lists and returns of effectives, the recruitment of men and horses, questions relating to arms and ammunition, and correspondence with private individuals.

In the field, the duties of the adjutant's department will be merged into those of the general staff without any fundamental distinction. The individuality of the several officers will count for more than categorical classification.

A certain number of orderly officers is always indispensable to the headquarters, their special duties consisting in the carrying of written orders to subordinate commands. In their selection great value must be attached to efficiency, endurance, punctuality and determination in overcoming unforeseen difficulties. Long and solitary rides in hostile country, especially when the population is excited, require

determined courage, good horsemanship, and a good horse. The best-mounted cavalry officers, with an undoubted reputation for doing their duty, both day and night, with alacrity and adroitness, are chosen for this kind of employment at headquarters. Both man and horse can perform more in time of war than a layman generally imagines. An orderly officer of Prince Frederick Charles covered the distance between Orleans and Vierzon and return—about 100 miles—on one winter's day during the Loire campaign, upon the same horse, and similar feats were of frequent occurrence in the German armies. At the headquarters of the second army it was found by experience that, for distances up to about fifty miles, it was best to have orders conveyed directly by orderly officers,* and only to employ other means, such as relays, for greater distances.

Given favourable climatic conditions and good roads, the mounted orderly officer of the future will meet a strong rival in the cyclist orderly officer, who will even be his superior at long distances. The cyclist cannot, however, displace the horseman, who is independent of roads, and the former is disabled by bad weather and heavy snowfall, besides being individually more defenceless than a horseman. The scope of the cyclist on lines of communication will principally be within the area of his own army and within districts less exposed to hostile intervention.

In the absence of telegraphic connection, communication between the various headquarters is kept up by field couriers (*Feldjäger*), several of whom are attached to every staff. These make their journeys, as a rule, by carriage or by rail.

Individual freedom and latitude are as desirable at head-

* It is a commendable practice always to send two orderly officers together on considerable and dangerous distances, not only for the sake of greater security, but also because horses go better in company, and remain fresher. It is seldom of advantage to send soldiers with them. One or two horsemen, in the case of a brush with the enemy, can do but little service, and their horses are, as a rule, not good enough to keep even pace with those of the officers. They would, therefore, be more likely to be a drag and a cause of embarrassment, than be of service.

quarters as in other places. Yet, in certain branches of staff duties a mechanical system may be advisable, so that, in times of great excitement, some things may not be forgotten or neglected when most necessary. It were well if every member of the headquarter staff were obliged, in addition to his ordinary duties, to take up some one special subject. We only need remind our readers of those numerous cases where armies have lost touch of the enemy. The reason is almost invariably to be found in the fact that the careful attention usually paid to the service of information was temporarily relaxed owing to all minds being under the charm of powerful sensations. This is especially the case after bloody battles, and late wars afford us sufficient examples. Nothing is easier to explain: a pending decision by arms captivates all the senses and all thought. A reaction takes place, and over-strained nerves resume their normal condition immediately the decision is over. Each corps will, as a rule, be content for the moment to rest on its laurels. Time passes unobserved, till people begin to rub their eyes and then make the discovery that the enemy has gone, and all touch of him is lost. In headquarters, in moments such as these, complaints are loud as to the non-arrival of any intelligence whatever from the troops. The fact is overlooked, that a comparatively large number of well-mounted officers is available to span the gap by a rapid ride in the tracks of the enemy. The men who ordinarily attend to the most important orders are at that moment occupied with other matters. A gathering of the higher staffs, perhaps including even the staffs of various army corps, on the scene of recent victory, is frequently responsible for the fact that over a discussion of the immediate past due care for the future is forgotten. It would be a capital arrangement if a man, not too much occupied with other duties, and not too high in rank, were made solely responsible for the uninterrupted maintenance of the service of information. He might conveniently be given certain independent authority over the younger officers of the general staff and the adjutant's department, who would mostly suffice

to supplement the activity of the troops in intelligence service, or to supply their deficiencies in this respect.

This merely by way of example; experience will teach us that a similar method in other matters will bear good fruit.

In the case of the representatives of the auxiliary arms, the chiefs of artillery and engineers, who act as advisers to the commander-in-chief, as well as their staffs; also the administrative services, the department of the commissary-general, the surgeon-general, the chief of the field police, the heads of the postal and telegraph services, &c., their functions are, from the very nature of the case, more distinctly definable. Orders and instructions may be issued for their guidance, which, whilst allowing great latitude to the commissary-general, will, in the case of the postal service, be very detailed and precise. Since the duties of all these functionaries proceed in fixed grooves, definite instructions are not a danger, as they would be in the case of the general staff proper, for which each day brings forth surprises which cannot be provided for beforehand. Independence of action and capacity of personal initiative, are, however, equally important for the secondary branches of the headquarter staff, since war brings every one into occasional unforeseen situations.

The duties of the chiefs of artillery and engineers, and of the administrative and medical services, will, of course, constantly touch those of the general staff, and will, in many cases, merge in them. The chief of the general staff, in his capacity of general director of affairs, will ensure the necessary harmony in working; he will, indeed, frequently have direct transactions with the several departments. This will especially be the case in the commissary-general's department, as will be seen when we come to discuss the question of subsistence. There are two officers who usually attract very little attention, but are nevertheless not the least important members of the headquarter staff. The first is the commandant of the headquarters. It is his duty to see to the discipline and orderly conduct of the small corps

represented by the headquarter staff of an army, embracing officers, men, carriages and horses. This duty is a very irksome one, because discipline is hard to maintain in such a mixed body, formed only at the commencement of hostilities. Proper subordination, as found in a permanent organisation, will be remarkable by its absence. Irregularities may be followed by serious consequences, trivial as it may appear, whether the train-soldiers with their waggons are punctual or unpunctual, or march in this way or in that.

Officers of the general staff, adjutants, &c., seldom have time in the field to attend to their own affairs, their servants, their horses and baggage. The office tent demands their attendance immediately they dismount, and they frequently only leave it again when another forward move is made without having time to look after their own belongings. But a lame horse, a lost shoe at the moment when, perhaps, a long ride is in view, annoys us the whole day long; whilst a mislaid chest, when one is anxious to start work at once, will utterly ruin the temper. Individual complaints of losses are the more annoying, as no remedy exists. It may be said that trifles ought to be disregarded in such momentous times; but the fact remains that we are men, and remain human even in war. That feeling of personal importance which the first few days will satiate, wears off when a campaign lasts for months, when the trivial annoyances of daily life will make themselves felt in a growing degree. The commandant of the headquarters, who tactfully assumes a fatherly *rôle,* and, in his capacity of universal provider, clears away all rocks against which contentment and good humour are apt to be shattered, deserves not only the thanks of those immediately concerned, but, indeed, of the whole army.*

For similar reasons the billet-master of the headquarters is an important personage. A man gifted with gastronomical

* Associated with him is the commander of the headquarter guard, *i.e.*, a small detachment of men which is assigned to the headquarters for orderly duties of all sorts. He can render valuable assistance to the commandant of the headquarters.

talent should, if possible, be discovered, able and willing to cater for the bodily wants of his comrades. Hunger and thirst cannot, after all, be disregarded by even the most enthusiastic soldier. At the headquarters, however, all those holding positions of any importance have no time to provide for themselves. This care must be taken from their shoulders. The general in command ought certainly never to be troubled about personal comforts. His staff is there for the express purpose of removing every stone from his path, and his servant should, like himself, be a genius in his profession. It is beyond doubt that a man who, in the midst of his great exertions, lives well, keeps himself in every respect fresher than one who is starving. These small considerations must not, therefore, be disregarded, as otherwise they come to the surface at the wrong time, and forcibly wrest their due.

Lower authorities, such as the staffs of army corps, divisions, &c., usually exist in time of peace, and the work of their several departments is regulated by long habit. Their organisation corresponds essentially to that of the headquarters of the army. The further we descend in the scale, the wider becomes each individual's sphere of action. In a division, for instance, the two officers of the general staff attached in time of war must display greater versatility and activity than is demanded of a staff officer of corresponding rank employed with the great general headquarters.

A felicitous composition of the various headquarter staffs, a happy choice of the men to be associated for the whole period of a war, and a clearly defined division of labour, are the foundation of the efficient leading of armies.

We in Germany have of late years been very successful in the organisation of our headquarters. The experiences of 1806 were not made in vain. The secret of our success must be sought in the absence of endeavour to discover the rigid model of a headquarter combination, the evolution of time, which acted as beneficently in this instance as in many others, being freely allowed to take its course. The headquarters of the Silesian army of 1813 formed the model for modern

times. Its success was due to the personal relations subsisting between the leading men. Blücher, Scharnhorst, and Gneisenau,* men of kindred mind, who met at a time when their fatherland was hard pressed, could not do otherwise than work together in harmony when, at last, the long-wished-for hour struck which was to realise the universal dream of the liberation of their country. When Scharnhorst was no more, unanimity was still preserved. In 1864, 1866, 1870, the same *unum in trio*, viz., commander-in-chief, chief of the general staff, and quartermaster-general, was again adopted. Here, too, men met who had already worked together in time of peace, and of whose cordial agreement the country was assured when war came. Nevertheless, there must have been plenty of differences of opinion. How could it be otherwise when robust virile characters, to whom the cause is more sacred than personal interest, are called upon to act in concert? However, nothing of the kind ever reached the outer world, nor did the army or the great cause ever suffer for that reason.

3. *The Command of an Army.*

It is a difficult art, to command properly. In the course of life one learns that it does not matter so much *what* and *how much* is commanded, than how commands are given. Parents gain the best possible experience with their own children, feeling that obedience depends very much upon the more or less decided tone in which the command is given. The tone of the voice often implies doubt, when, in spite of the most violent expressions and most energetic gestures, disobedience becomes a foregone conclusion. In relation to our children we follow the rule of forbidding nothing where, owing to the force of circumstances, disobedience may be anticipated; and of commanding nothing to be done, the subsequent accomplishment of which is bound to prove im-

* Later, after Scharnhorst was wounded and died, Blücher, Gneisenau and Müffling.

possible. But above all things—and who fails to realise this?—every command must be clear, so that its recipient will know exactly what is expected.

These simple rules also apply to the conduct of war; there is no higher wisdom. But, however simple, war is such a complicated business that their application is not so easy. In war, great responsibility attaches to every order, and a mistake is promptly overtaken by its punishment. That fact fills the person giving an order with solicitude, and it is readily conceivable that the art of commanding is an affair of character rather than of intelligence. Moreover, whenever affairs take a serious turn, we may expect a lack of orders, rather than a superfluity. Any redundancy in the matter of orders is usually only of a negative character. Where the possibility of failure is felt, an order is often sent, which, though not likely to stem the tide, still is meant to show that the sender had not been unaware of the danger. Frequently there is also present a lurking wish not to have to bear the fault oneself, but to adroitly slip it upon some other shoulders, just as in certain games at cards a player delights in palming off a bad card on his neighbour before the last trick is played.

Finally, all orders in war rest upon a very insecure foundation. They are based upon supposed knowledge of the enemy, which, however, is never quite complete. Thus we are stultified in the observance of our second rule, which is, not to command the impossible.

If these facts found proper consideration; if every one would only command that for which he is ready to undertake the whole responsibility; if purely negative orders were never given, and if no one ordered more than, from his personal knowledge, could be carried out with certainty, much would be gained.

The next consideration is to decide how far, in issuing orders, it is permissible to enter into details. A number of considerations here confront us; the whole constitution of the army must be considered. We Germans were often

unable to suppress a smile when the "instructions" issued by the French leaders to their armies, and especially those of the Republic of September, fell into our hands. The well-known book of Chanzy, "La deuxième armée de la Loire," contains a considerable number of them. In chatty style we are told of events in this fashion: "The enemy endeavoured to-day to force us from our position; he attacked us successively at St. Laurent des Bois, in front of Poisey, in the direction of Cravant, and in front of Villorceau. According to information given by prisoners, the whole army of the enemy was engaged, together with a numerous artillery. We have nevertheless resisted this attack with much energy and in good order, and have remained masters of our position, after causing the enemy considerable loss. Every one should be inspired by this new success, and should take fresh hope; for we must keep our positions and offer renewed resistance if the Germans should make a fresh attack on the morrow."

Such narratives, and others of even greater length, form the introduction to orders covering three or four pages of print, and containing numberless details. This would, in our case, be quite inconceivable; and yet these orders were issued by one of the most capable of the French generals of that period, who was, moreover, assisted by an excellent chief of staff.

The reasons for this arose from the exceptional constitution of the army, in which much that with us would be a matter of course, with them was not so, and had therefore to be embodied in orders. Many generals and officers were new to their duties, many men of note in the hastily improvised army had drawn their swords for the first time, in order to assist in the defence of their sorely stricken fatherland. Initiative, experience, and forethought were wanting. The commander in the field had not simply to issue his orders, he had at the same time to teach and explain in the clearest possible manner what was expected of each individual concerned, regardless of the consequent length of his "instructions."

Similar conditions prevailed during the war in Thessaly in 1897, since we read in the Turkish army orders relating to the battle of Pharsala :

"Communication must be kept up between the several divisions. If one of them be attacked by the enemy, it must be supported under all circumstances, either by an attack on the flanks of the enemy, or by moving up to reinforce the division attacked. Commanders disregarding this order will be brought to a strict account.

"Details for the guidance of individual divisions will be prepared by their respective staffs, &c."

Again, the orders relating to the battle of Dhomokos contain a special reminder that the question of measures of security and orders for the advance and tactical formations were to be left entirely to staffs of divisions. It was explained at the same time that divisional commanders need not necessarily communicate the orders from army headquarters to their subordinates verbatim, but that only their own dispositions, based on the instructions contained in army orders, were to be published.

With us, such details would naturally be entirely superfluous.

It must be remembered that the Turkish staff officers issuing those orders were trained partly in Germany itself, and partly in Constantinople, but on the German system. They thus knew, as well as any of our own staff officers, how an army order should be drawn up. If nevertheless such peculiar details crept in, it was due to a shrewd presumption that in their own army simple rules on the conduct of war were still far from being common property, and that, in order to ensure success, orders had to be most explicit.

The peculiar characteristics of an army, its training, customs, &c., must be the guide in each particular case.

Given, however, a system like our own, it may be practicable to formulate a few general principles, one of them being that a superior should never prescribe from a distance what a subordinate on the spot is in a better position to

determine for himself. In that way orders are simplified, while the subordinate enjoys the necessary scope for the exercise of his discretion. Another point is, not to specify in orders any particular action, when the conviction seems justified that it will not be omitted, although not mentioned in orders. It is a dangerous habit to embody such details habitually in orders, and a commander should exercise care that nothing be forgotten by strict supervision, rather than by continually resorting to reminders in his orders. Once troops are accustomed to having every petty detail prescribed from above, they are apt to remain absolutely inactive if, by chance, orders are not forthcoming.

The most important and best orders ever given in our time were always brief and simple.

We may quote, as an example, Moltke's famous telegram, of June 22, 1866, to the First and Second Armies at Görlitz and Neisse:

"His Majesty commands that both armies shall advance into Bohemia, and endeavour to concentrate in the direction of Gitschin."

When later, on July 2, the Austrian army was discovered behind the Bistritz, and a decisive battle for the First Prussian Army under Prince Frederick Charles seemed imminent for July 3, the Crown Prince, who commanded the Second Army, was summoned to the spot by the simple words:

"Your Royal Highness will at once make the necessary arrangements to advance with your whole force to the support of the First Army against the right flank of the expected advance of the enemy, and will attack as early as possible."

This led to the victory of Königgrätz, which was decisive of Germany's internal constitution.

Again, could anything be more concise than the following?:

"From information received it may be inferred that the enemy intends to make a stand on the plateau between Le Point-du Jaur and Montigny-la-Grange.*

* Any sketch map of the vicinity of Metz will explain the examples now quoted.

"Four of the enemy's battalions have occupied the Bois des Génivaux. His Majesty is of opinion that it will be advisable to direct the 12th and the Guards Corps upon Batilly, so that, if the enemy marches on Briey, he may be met at Sainte-Marie-aux-Chênes, or, if he remains posted on the height, be attacked from the direction of Amanvillers.

"The attack would have to be made simultaneously, by the First Army from Bois-de-Vaux and Gravelotte; by the 9th Army Corps against the Bois des Génivaux and Verneville, and by the left flank of the Second Army from the north."

Thus ran the decisive orders for the attack issued before the battle of Gravelotte and St. Privat, an attack for which 200,000 men were set in motion. There is no mention here as to how the troops are to form up, what measures of precaution they are to take, how they are to render mutual support, how to maintain communication, &c. All this is left to the discretion of the commanders-in-chief of armies and to generals commanding army corps.

Let us cite, as further example, a specimen of the instructions issued pursuant to above order, which emanated from the headquarters of the Second Army:

"The enemy holds the heights of Leipzig* and Bois de Vaux. He will be attacked there to-day—

by the Guards Corps via Amanvillers,
by the IXth Corps past La Folie,
by the VIIth and VIIIth Corps in front.

"To follow in second line in support—

the XIIth Corps upon Ste. Marie.
the Xth Corps upon St. Ail,
the IIIrd Corps upon Verneville,
the IInd Corps upon Rezonville."

Here, too, there is certainly not a single superfluous word. In particular cases, however, the possibility of some detail being expressly ordered by superior authority is not excluded, especially when the importance of such detail could not be

* A farm 3 km. south of Amanvillers, near Metz.

realised by the subordinate commander. We thus read in an earlier order relating to the same attack of August 18, 1870:

"The IXth Corps is to advance in the direction of Verneville and La Folie. In the event of the enemy's right wing being established there, it is to open the attack in the first place by deploying a large force of artillery."

In this instance, then, the manner of execution is laid down to the general commanding; but there was a special reason. It was the intention of the supreme authority not to make a decisive attack in front till the intended turning movement on the enemy's right had been completed. Hence the necessity of advising the corps, which would probably be the first to come in contact with the enemy, not to become involved at once in serious fighting, but only to open at first a brisk cannonade. Similar cases will always occur, in which the commander-in-chief must not be deterred by fear of offending against the rules of his art from giving personal orders regarding some small detail.

How far details may be gone into will depend upon the position of the person commanding. The commander-in-chief at the head of great armies, composed of independent corps commanded by generals of high rank, will often have to confine himself to an expression of his wishes and intentions, leaving it to them to contribute to their realisation according to the extent of their means. Thus, in the first three of the orders quoted little more is expressed than the views and general intention of the king. Yet a uniformly similar procedure would not always be safe. The commander-in-chief must keep a portion of his army tightly in his own hand, and under his own eyes, in order to have a force at his immediate disposal whenever unexpected events should render his personal intervention necessary. The corps at his command in such moments acts like the rudder of a ship, which would otherwise be unmanageable. As an illustration of the many embarrassments which may arise when the commander-in-chief has no reserve in hand, having given all his corps full liberty of action, we need only point to the

instance of Blücher during the memorable days of 1814. When Napoleon suddenly appeared before Champaubert and attacked the Russian general Olsuwief with superior forces, Blücher, with his head-quarters, was in Vertus. But he had not one single man there at his own disposal. In the feeling of security which had taken possession of the Silesian army since La Rothière, and in consequence of peculiar circumstances, all Blücher's divisions had independent tasks assigned to them. Blücher and Gneisenau certainly knew that it was all over with Olsuwief, as he was weak and without cavalry, and the French cavalry hemmed him in on every side in the plain, and that Napoleon, after defeating the general, would stand victorious in the midst of the columns of the Silesian army, yet neither of the two could either help or suggest a remedy; for, in war, help and counsel are without value unless backed up by bayonets. Marshal "Vorwärts" was obliged, accordingly, in bitter wrath, to decide upon retreat, and to proceed with all haste to the corps of Kleist at Fère Champenoise, in order there at least to have some troops at his command.

Whilst therefore divisions in close proximity to the enemy and at a distance from head-quarters enjoy great liberty, and, as a rule, only know the wishes of the commander-in-chief without any other rule to guide them; those far removed from the enemy, and being near their commander at his immediate disposal, must submit to precise orders, and be content to go in leading strings. Their consolation must be that *rôles*, as a rule, soon change. The lower the position of the person issuing orders, the smaller his command in comparison with the whole, the more will his orders enter into details. Freedom of action is here confined within ever narrowing limits. Troops in front, in rear, and to the right and left of us must be considered; and thus the possibility of clashing increases.

The general commanding an army corps can only in very rare cases—as, for instance, when he is detached with his army corps and separates his divisions—issue orders to these

similarly to a commander-in-chief to his several corps. If he is compelled to advance upon a single road, it will even be part of his duty to determine in what order the different parts of his corps shall march. The commander of a division must do this regularly, except he has had an independent mission assigned to his division, which entitles him to act independently, as with a small army. Seeing that a division, as already observed, is considered to be the smallest unit for the great operations of war, his orders will, as a rule, reach so far down, that each battalion, each battery, and each squadron will learn its place without the intervention of any intermediate authorities. In battle all this will be altered. The commander of a division will dispose of the several groups into which his command is divided in accordance with the objects in view and the course of the contest.

During the war of 1870–71, a system of command was gradually evolved, which proved its excellence under all circumstances, and which may, for the present, be taken for a model. During the first days of the war, the great headquarters conducted operations by means of short telegrams, the same as four years previously.* The work of the General Staff upon the war, however, hints that this procedure was not generally of a satisfactory nature.†

Very soon, when all danger of the plan of the German operations being deranged, and of one of the armies being isolated and attacked by the enemy with superior force, was past, and greater freedom of action had been gained, the place of short directions, which indicated only the next steps proposed to be taken, was given to so-called letters of guidance (*Direktiven*). The name thus casually adopted is not pretty—a purely German word would have sounded better —the principle, however, is excellent. According to the definition of the work of the General Staff, letters of guidance are "communications from a higher authority to

* See p. 108.

† Cf. "Der Deutsch Französiche Krieg," edited by the Historical Section of the General Staff, vol. ii. pp. 154, 155.

a subordinate commander, intended less to convey definite orders as to his immediate action, than to indicate leading features for general guidance. The latter should then facilitate judgment in subsequent decisions to be taken independently." Such communications, which, while allowing great latitude, ensure effective co-operation of all the forces, are singularly opportune in these modern times when, owing to the size of armies, single objects are striven for with divided forces. They are doubly practicable for the purposes of the great general headquarters, which are usually at some distance from the main army, and can only exercise control in a general way.

As an example of the proper composition of such letters of guidance we will quote here those received by the army of Prince Frederick Charles after the battles of Orleans and Beaugency, in which the great army of the Loire, led by General d'Aurelle de Paladines, had been defeated and split into two parts at the moment when it was preparing to march to the relief of Paris. One part of the defeated army, namely, the right wing, which had now become the First Army of the Loire, under the independent command of General Bourbaki, had marched away to Bourges. The other part, the Second Army of the Loire, under General Chanzy, after having been reinforced by fresh troops, offered an obstinate resistance at Beaugency to the Grand Duke of Mecklenburg, who was in pursuit, until Prince Frederick Charles directed all the German forces then on the Loire against him, when he retired westwards, behind the Loire, and, later, to the Sarthe.

The letters of guidance received during these operations, issued in ordinary letter form by General Von Moltke to the chief of the general staff of the Second Army, General Von Stiehle, date from December 12, and run in their most important part as follows:

"Since in the last days of November, and the first days of this month, we have succeeded in frustrating all the attempts made by the enemy from different directions to relieve Paris,

it should next be our principal endeavour to put all the enemy's troops, which were employed for this purpose, and which are but loosely organised, out of action for the near future by an energetic pursuit.

"This, according to my view, applies particularly in the case of that of the enemy's army corps which recently opposed the troops under the command of his Royal Highness the Grand Duke, and which must be further pursued with sufficient forces, and, as far as possible, be dispersed.

"On the other hand, it is undeniable that, before Paris falls, our forces will not suffice to extend our operations too far in a south-westerly or westerly direction, where, accordingly, the operations must, for the present, be restricted, which will further enable us to give the troops the rest so urgently called for after the fatiguing movements and battles of the last few days.

"Without special reason, the line of the Cher, *i.e.*, the line Tours—Bourges—Nevers, must not be passed by the Second Army, with Orleans, where the bulk of the forces would be held in readiness, as its *point d'appui.*

"The west to be secured by the force detached under the command of his Royal Highness the Grand Duke of Mecklenburg-Schwerin. If, as seems to be the case, the troops formed in Conlie already joined the Army of the Loire, and have consequently become involved in its retreat, a central position about Chartres, at not too great a distance from Paris, would allow of the special organisation in question being broken up or of at least part of its components being relieved. The orders from the Royal Bavarian headquarters with reference to the occupation of Orleans by parts of the First Bavarian Army Corps will not be affected by the foregoing scheme.

"Especial attention must, in my opinion, be paid to a constant and careful observation of the enemy's corps (the 18th and the 15th), under the chief command of General Bourbaki, which have retired by way of Giens, in the direction of Bourges and Nevers.

"In the event of a possible fresh advance by the latter, we propose the co-operation of General of Infantry Von Zastro,* who, from to-morrow, will be at Châtillon-sur-Seine, and is to be reinforced by the 60th and 72nd Regiments of Infantry. I leave it, therefore, to you to keep up communications with said general."

All letters of guidance should be drawn up similarly to the example quoted. They disclose the views and wishes of the supreme authorities at the great general headquarters, and leave it to the discretion of commanders of armies or army corps to decide on the best method of conforming to them.

An individual commander of an army will but rarely be in a position to employ letters of guidance, that being only in the case of one of his army corps being in a detached position, charged with some special mission, when it may be assumed that the commander will find it necessary to take independent action without previous reference to the supreme authorities. Such a contingency may arise where a corps is to secure the flank of an army advancing to the attack, when in pursuit of defeated hostile bodies, when separated from the main army by rivers or hills, &c.

Letters of guidance will frequently have to deal with alternative contingencies, though, generally speaking, anything likely to create doubt is a serious fault. It is certainly rather precarious to base orders upon such a shifting foundation, as the enemy may act in a manner not provided for, and that will most certainly create perplexity in earnest.

But war produces situations in which decisions must be made, even though it be still impossible at the moment to divine the enemy's probable course of action. The orders already referred to, of the great general headquarters for the attack of the 18th August, assume two possible situations for the left wing of the Second Army, *i.e.*, the two army corps to

* The commanding general of the Seventh Army Corps, who was then moving with the greater part of his army corps through central France, between the army of Prince Frederick Charles on the Loire and the army corps of General Werder in the Saone district, to secure the German homeward lines of communication against interruption from the south.

be sent forward in the direction of Batilly: that either the enemy was marching on Briey, or that he was posted on the heights before Metz. In each case a special course of action was prescibed. A similar necessity was demonstrated in a still more striking manner in the case of the army of General Mauteuffel, when, on the 24th January, 1871, it arrived before Besançon. After the failure of his attack upon the Lisaine position General Bourbaki had retired along the upper Doubs, under the shelter of the fortifications of that stronghold. General von Werder had followed him between the Doubs and Oignon. The latter confronted the enemy on the north, and the 2nd and 7th army corps on the south side. There was no doubt whatever that the enemy could not remain at Besançon owing to the insufficiency of provisions to keep the army for any length of time there. General Bourbaki was bound, in the course of the next few days, to sally forth from under the protection of the forts. But in what direction? He might, as the great road to the south was already barred, attempt to break through between it and the Swiss frontier, but he might also, in order to save himself, venture to force a passage towards the south-west on both sides of the Doubs. It was, moreover, equally possible that he should break through on the north-west, in order to join hands with Garibaldi in Dijon, or again confront the army corps of Werder, which was, for the moment, his weakest opponent. Finally, it might be also assumed that he would lead his army to the Swiss frontier, or that he would await the attack of the Germans under the walls of Besançon.

All this was possible, but, of course, required the most varied measures to be prepared, and, possibly, demanded rapid decision on the part of the generals directly concerned before the commander-in-chief himself could issue instructions from head-quarters at La Barru near Dampière. It thus happened that the letters of guidance provided for no less than six different cases, and in each case prescribed for the army a definite course of action. General von Manteuffel ended up with the following words, addressed to each one of the com-

manding generals: "Under the existing circumstances, when an immediate co-operation of the three corps cannot well be effected, and may perhaps not even be practicable, I did not wish to omit to inform your Excellency of my view of the situation *as stated above, so as to enable you at any moment to commence operations before receiving orders from me, in case circumstances should demand a rapid decision.*"

Similar instructions were necessary before Metz, when the army of Bazaine was invested there.

Evil did not result in either case; on the contrary, uniform and appropriate action on the part of all concerned was the direct outcome. It will, of course, commend itself, not to draw the dividing line between assumed situations too finely, so that it may be possible, without application of great ingenuity, to decide which case has actually arisen.

It goes without saying that all letters of guidance assume the presence of prudence and the habit of initiative in subordinate commanders.

The old notion of "disposition" has now disappeared. It implied, to a certain extent, the idea of a fixed programme of operations, based upon certain suppositions, and went further than a mere order.

Now, besides letters of guidance, we only know army orders, corps orders, division orders, &c. The difference between these latter and the former is, that these do not give general ideas, but prescribe definite measures, marches in a given direction, attacks, &c. Another characteristic feature of them is that they do not, as a rule, provide for various contingencies, but only for the situation *which the commander regards as being most probable at the moment.* As has been already mentioned, they should stop short where doubts begin and future events cannot be anticipated. Exceptions will occur, because a strict dividing line between orders and letters of guidance cannot always be drawn, but they are rare.*

* The hackneyed phrase, which occurs more often in theory than in practice, that an army or division should act according to circumstances, is

Again, we read in the Field Service Regulations :—" Letters of guidance must lay stress on the object to be attained, but leave open the means to be employed."

In this case of orders, too, although they are clothed in more precise terms than letters of guidance, no rules can be prescribed, yet certain points may be laid down which must never be omitted in their compilation.

To begin with, every order in war, as already stated, is based upon a definite assumption as to the situation of the enemy. Though each one be issued in good faith, it must not be regarded as an article of war, every departure from which entails punishment, since it loses its validity so soon as it becomes apparent that the supposition on which it was based is erroneous.

Every order, accordingly, begins with information of the enemy.

Here, precaution is imperative ; it will, as a rule, be advisable to mention the source of the intelligence, especially when there are inward doubts as to its credibility. Supposing the orders from above run simply : " Information of the enemy says, so and so, &c.," the contents of this order will be immediately regarded by the recipients as something absolutely correct, and may lead to illusions. If the source is mentioned, as " Information given by peasants, by spies, the reports of patrols, &c., say so and so," every commander is in a position to appreciate the degree of credibility, with the result of either exciting suspicion and caution, or of confirming his confidence.

It is also of importance to distinguish clearly actual information received from particulars based on assumption.

If, in the interest of our study, we may be permitted to " be wise after the event " on the subject of the orders for August 18, the following would seem deserving of notice :

On August 18, early in the morning, only the left wing

superfluous. If nothing is ordered beforehand, there is nothing left but to act according to circumstances, even without special permission from above.

of the French position on the heights of Le Point-du-Jour was perceived. Only here our patrols were in permanent touch with the enemy, and only from this point did intelligence come in. What the position of the French front was, and how far it extended, was unknown, as the right wing was not within view. On the morning of the battle, a communication was issued from the great general head-quarters intimating to the different armies that the opinion prevailed that the main forces of the enemy stood before Metz and that their position extended as far as Amanvillers. From the extreme left of the French upon the heights at Bois de Vaux, where they were seen, to Amanvillers is about four and a half miles. At Amanvillers the bare slope forms a depression, through which the railway now runs. The supposition that the right flank of the French rested on this depression, and that their front did not extend further, had much in its favour, although this subsequently proved a deception, and it was found that the French line of battle extended almost twice as far, that is, as far as Roncourt. It was thus quite correct to speak only of "a view taken." But what was originally clear, became gradually more confused. In the order first cited, the position of the enemy was definitely described as being upon the plateau between Le Point-du-Jour and Montigny-la-Grange. The order certainly began with the words, "From information received it may be assumed"; but these words evidently referred only to the inference that the enemy would make a stand, and not to the position, which is clearly described by the words, "upon the plateau between Le Point-du-Jour and Montigny-la-Grange." At the head-quarters of the Second Army, where, too, complete information as to the extent of the enemy's right wing was lacking, this sketch of the position was accepted without reserve, and in the orders subsequently issued to its corps and divisions, we meet, for instance, with the words, "The enemy is posted upon the heights of Leipzig and Bois de Vaux."

Thus, what was originally stated as a supposition, was at last treated as definite fact. Even if in the detailed orders

from the head-quarters of the Second Army to the Guards, we do find the more correct conception, viz.: "The enemy *appears* to be deployed upon the heights of Bois de Vaux in the Leipzig direction"; yet the idea of the enemy's right wing being in the neighbourhood of Amanvillers was so firmly established by the first information that all dispositions were made accordingly. The Guards received orders to advance upon Amanvillers to turn the enemy's right flank, which was firmly believed to lie *south* of that place, whereas in reality it was a good stretch to the north of it, and the corps at Amanvillers would probably have struck the centre of the enemy's front. Perhaps the illusion entertained on that day as to the extent of the French line of battle would have been removed earlier if the information circulated had invariably corresponded with the real extent of the knowledge of the enemy, and it had perhaps been said: "The enemy is deployed with his left wing upon the heights of Le Point-du-Jour; how far his right wing extends is as yet unknown," &c.

It is, of course, incomparably easier to hit upon such things afterwards, when one sees the consequences of actual events, than it is at the moment of action. We have, therefore, described our wisdom as being of the *esprit d'escalier* order, which, as a rule, comes to us when we descend the stairs of the council-house, and when it occurs to us what clever things we might have said in the august assembly just quitted. Yet closer investigation shows us that some one on the spot did hit the right nail on the head. In a report brought in on the morning of the battle,* which describes the French position at greater length, we find these words: "Their right wing, covered by brushwood, cannot be perceived."

Hence in drawing up the information of the enemy which preludes the orders, extreme exactness must be observed, and the one or two lines forming the introductory paragraph must be worded with perspicuous clearness.

The second paragraph of every order ought to contain the

* From a staff-officer of the Second Army.

intentions of the commander in general outline. Since they are the immediate result of information regarding the enemy, they follow the latter in natural sequence.

That the commander-in-chief, or troop leader generally, should lay down his intentions clearly and plainly, appears a matter of course, and it would seem, accordingly, superfluous to say more upon the subject; but even on this point experience teaches us differently.

In the first place, it is often difficult to formulate one's own intentions for even a few hours in advance. Situations in war are so uncertain, that in early morning we cannot possibly foresee what we shall want to do about nine or ten o'clock in the forenoon. Out of consideration for the troops, the orders for the next day must, as a rule, be issued towards evening, and the night may bring forth many changes in the situation. Very frequently nothing more will be possible than to appoint the places where the troops are to form up on the following morning in readiness for subsequent operations. But this must be definitely stated in order that the subordinate commanders may know that everything else is still uncertain, and that they must not, therefore, commit themselves by premature contact with the enemy.

Another time, again, the intentions of the supreme command appear so patent, that it is considered unnecessary to repeat them in detail in the short and hastily written orders. Having been the constant theme of discussion in the headquarters, as well as among all the higher officers, it is naturally assumed that every one must know them. They may, nevertheless, have remained unknown in a critical place. How often has not an army corps, originally designed to play another part, been called upon to turn the scale? On August 18, for instance, the Saxons, of whom it was thought that they would possibly have to undertake the pursuit of bodies of French troops which had marched off towards the west, were in the end obliged to turn eastward, to effect the turning of the French right.*

* This turning movement, as is well-known, decided the battle.

The general intentions of the commander-in-chief ought not, as a rule, to be unknown to any of his generals likely to be called upon to undertake independent action. We have seen instances in 1870 of commanders of brigades and divisions, by their own independent action, bringing on battles contrary to the intention of the commander-in-chief, thus actually determining, on their own responsibility, the fate of the whole army; *and such events will always happen so long as the troops are animated by love of action, and so long as initiative remains the property of their commanders. They are bound to occur whenever large forces co-operate, if the best opportunities are not to be wasted.* Hence it is all the more necessary that subordinate commanders should be initiated into the general intentions of the commander-in-chief. Secrecy will only be endangered in very rare cases, as, in the first place, communication is restricted to a comparatively small number of officers of high standing, and, again, in the moment when the orders are issued to carry out an operation, this latter is usually so imminent, that, even if information reached the enemy, it would be received too late to be of any value to him.

Though the time before the beginning of decisive movements preceding a battle is often very short, there will always be a few spare minutes in which to express the intention of the commander-in-chief in a sentence or two with clearness and precision.

As on August 18, 1870, the one leading idea was not to seriously attack the enemy's naturally strong front until his right had been turned, it would certainly have been of advantage to have had this repeated in all orders, even though it might be assumed that this was generally understood. As a fact, the attacks made on his front soon became much more serious than was originally intended. This would have been obviated if, immediately following the statement as to the enemy's position, it had been indicated how, in the opinion of the headquarter staff, the attack should be carried out. The intention of the

commander-in-chief is the only guide regarding the conduct of subordinate commanders, if an order cannot be carried out in the way intended. It must therefore be made known to them with unmistakable clearness.

The paragraph expressing the intention will naturally be followed by necessary complementary instructions. Their nature is entirely dependent upon the circumstances of the moment. We shall discuss them in the following chapters in detail.

As a general rule, an exact consideration of time and space is the chief essential. Mistakes in this respect appear unpardonable, though they are often made even by great generals.* One acquainted with war will not find anything strange in this. A measure is discussed upon the battle-field, and the orders are being sketched out. New information is then received, when it has to be considered whether the original intention is still practicable. Subordinate commanders arrive; and the commander-in-chief must speak to them. Urgent affairs claim his attention throughout. A great cavalry attack in course of execution demands his attention; an offensive movement on the part of the enemy keeps his nerves in a state of high tension. Troops march by and salute their esteemed leader with hurrahs. A few words of encouragement and thanks are indispensable. Then a gallop to another part of the field to watch the end of the battle. Finally, when the last shots have been fired, the thought occurs of an order yet to be despatched. His signature is quickly affixed, and an orderly officer sent off with it. He has failed to notice that meanwhile hours have passed by, and that the details as to time should have been altered, and that consequently the troops ordered up cannot now arrive so soon as ordered. Possibly, too, reliance is placed upon the correct appreciation of the recipients, and it is expected that they will make the necessary modifications. But the mistake has been committed, and cannot be rectified. He who bears in mind the state of

* Blume, "Strategie," p. 143.

turmoil in which orders are often written, will be able to excuse the fault; but, nevertheless, such occurrences undermine confidence, especially when they are frequent, and the error is only too apparent.

As to the order in which the instructions ought to follow each other, something may be said next. The sequence will principally depend upon the relative importance of the several measures necessary. That first mentioned impresses itself most deeply upon the memory, hence the most important matter claims first place, unless it be necessary to commence with a few introductory explanations. Measures of secondary importance, which have for their object only to help generally to ensure the success of the principal undertaking, come last in order.

If a normal sequence, as indicated, is impracticable, it will be best to begin with the troops intended to move first and farthest to the front, for instance with the large body of cavalry moving far in advance of the army. Whilst in reading the orders we grasp their scope by reference to the map in our hand, we gain at the same time familiarity with the position of places, roads, &c., which will recur in subsequent paragraphs, and we shall readily recognise them when they are met with. Thus we quickly gain a clear view of the whole.

Dispositions regarding the cavalry being settled, instructions for the advance guard, the main bodies, the flank detachments, and special details would be the next consideration.

In this way a sequence is attained in general correspondence with the order in which executive action is required, and such arrangement cannot fail to be of advantage in respect of clearness and general lucidity.

No one, except in orders for a retreat, would place the instructions for the trains and supply and other columns before those for the troops, or intermingle the two. The former must be placed at the end.

We must, moreover, consider that orders in the field have

very frequently to be not merely written, but also read and weighed, under very trying circumstances. If, in military history, we meet with admissions that something had escaped notice here, and something had been forgotten there, we are prone to pass severe judgment, and to exclaim, "How was it possible?" We do not, as a rule, bear in mind the fact that the general, be he ever so conscious of his responsibilities, cannot be perpetually awake, fresh and active, and that weariness overcomes him, as it does every other mortal. Perhaps a conference, the issue of instructions, and the arrival of information and reports have kept him awake until late in the night, and possibly, too, after a day passed in the saddle in winter's cold and snow; and he may be just about to lay himself down to snatch a little rest in the poorest of quarters, when an orderly officer arrives with orders from a superior authority, waking him from tardy sleep to renewed activity. He must at once read, decide, resolve, and send further orders to his subordinates. It frequently happens that an interruption of this kind is caused without good reason. It is hard to renounce the rest which every limb so urgently demands. The despatch—probably written in great haste—must be deciphered in an indifferent light, by the flickering flame of a fire in the grate, or by the bivouac fire in the open; maps are produced, and often it is difficult to improvise a table upon which to spread them. The greater, under such conditions, the length of an order, the more names it mentions, the more subtilities it contains, the more essentials are interspersed with unimportant details, the greater will be the chances of mistakes, misunderstandings, failure to distinguish the essence from the non-essential, and of similar errors occurring. Again, let us reflect that, at least in our army, all men of high rank are of an age when both intellectual and physical powers are on the wane. Napoleon, when only forty-one years of age, complained that he lacked his former vigour. "The smallest ride is a labour to me," he wrote. Frederick the Great, when at the age of forty-eight years,

poured out his heart to his friend D'Argens: "I have to perform the labours of a Hercules at an age when strength forsakes me, debility increases, in one word when hope, the comforter of the distressed, begins to fail me." Most of our battalion and regimental commanders are of that age, and still far removed from positions of really high importance. This condition is difficult of amelioration so long as we wish to maintain for our corps of officers the salutary uniform rule, according to which the prospect of advancement to the highest positions is open to all, while promotion generally goes by seniority. Extensive retirement in the higher commands may cause a periodical reduction of age among the officers, but reasons of national economy will impose strict limitations and forbid certain bounds to be exceeded. We must certainly, for a long time to come, be prepared to see men of considerable age occupying the highest positions, though there may be a few exceptions. In the case of sexagenarians, however, the mind can scarcely work with unimpaired rapidity or memory retain its old vigour.

That factor must, hence, also be taken into account in the process of drafting orders. The latter must be easily understood and, in their main points, be readily retained in memory; which primarily demands that all extraneous detail be excluded from orders relating to movement and battle. Instructions regarding the train, the various columns, and vehicular traffic generally, cannot, it is true, be entirely omitted, since the troops must know where to find food, ammunition, hospitals, &c., but it will, in most cases, be sufficient to indicate their location. The manifold small details still necessary in this respect are best embodied in a special supplementary order. Matters of supreme importance concerning the movements of the troops, and points which must be constantly under the commander's eye with absolute clearness, being thus divested of all accessory detail, the main thing will stand out with greater prominence. When, for instance, General Chanzy, in his instructions of January 8, gave a long list of appointments and promotion of officers and

surgeons, adding, as we should say, to his orders for operations in the field the usual official notices in the "Militär-Wochenblatt," we are more inclined to find fault than with his going, in the first part of his orders, which should deal with information regarding the enemy and the dispositions of his own army, too deeply into details, and his assuming a pedantic tone. These personal notices were followed by instructions as to the occupation of the issues of the forest of Marchenois, that is, a part of the order for operations, and the order closed with a reminder to the commanding generals to send frequent reports. It is evident how easily this latter might have been overlooked—if not at the first reading, at all events later.

A mention which should never be omitted is as to where the officer issuing the order will be found, in order that reports and questions may reach him without fail.

The construction of every order given in the field ought to afford as clear a *coup d'œil* as the structure of a Greek temple, since only thus clearness of ideas and resolute action can be assured.*

We must still devote a few words to the influence of distance upon the exercise of command, because it also makes itself felt in the appreciation of military situations.

The immediate impression has always the strongest effect, and it is but natural to pay less attention to a distant danger than to one nearer at hand. This explains why

* The use of maps in drafting orders is not without its importance. A concise style we take for granted. But it ought also to be announced in every army, according to which of the different maps available, the orders have been framed. Not only does each particular map represent topographical features slightly different, but the type used for the names of the places often varies. What one map brings into prominence in large letters, another map shows in small and scarcely readable characters. If, now, different maps are used by the commander, and by the recipients of his orders, great loss of time may easily be caused by searching. The author, who, during the war of 1870–71, belonged to a headquarter staff, remembers the whole of one night being spent in trying to find the name of a farm, mentioned in a report. It was only when by chance another map was taken up, that it was discovered ; for, on the latter, which had probably been used in drawing up the report, the name was given in large type.

in war each one believes that where he is fighting the fray is the hottest, and that the situation in his zone of operations is the most difficult. On the one hand we may thus be led to demand more of others than of ourselves, because we perceive plainly enough the task that our neighbour ought to fulfil, but not the impediments in his way. On the other hand, it is of advantage under certain circumstances not to be obliged to think and to act under the immediate impression of danger and difficulty.

Experience proves that boldness of decision increases in proportion to distance. We survey with a calmer view a more extensive area of the field of operations, and perceive more clearly the secondary importance of a matter which appears to those on the spot of the utmost moment, because they are immediately affected by it, and we enjoy greater facility of devising means of compensating, by successes on one part of the field, a possible disaster on another.

Beyond doubt, the supreme commander is very much benefited by being at a certain distance from the field of action of the several armies. He must be, in every emergency, the centre of energy ; must always be ready, whenever a subordinate general hesitates, to assume responsibility, and to weigh with full objectivity the relative importance of all operations. He ought, therefore, to be outside the pale of influence of the tumult, the disquietude and the anxiety incidental to the daily life of troops standing closely confronting the foe. Serene calmness ought to prevail in the atmosphere surrounding him, and only in some few critical moments ought he to descend into the excited arena of battle and make his disposition under its direct influence. If this occurs too frequently, the grasp of the situation as a whole will be lost, and the spectacle of the misery of war will gradually react prejudicially upon the flow of ideas.

It was striking how, in the winter campaign of 1870–71, the dangers which threatened the German troops in the provinces were always more lightly regarded in the great general head-quarters than in the head-quarters of the armies

concerned, who were engaged in protecting the forces besieging Paris against attempts to relieve it. The strength of the army of General d'Aurelles de Paladines in process of formation on the Loire, and round which the hopes of France were centred, was at first greatly under-estimated. It was only after the battle of Coulmiers that it was called "entitled to respect," and it was admitted that it might possibly number from sixty or seventy thousand men upwards. Up to that time its destruction was regarded as a comparatively easy task.

Within the forces marching against it, too, doubts increased in proportion as the intervening distance decreased. Whilst, at first, an easy victory over such loosely organised troops was anticipated, and the scene of the decisive strokes was laid in Bourges and Tours, as time went on, information, views, and decisions were modified; difficulties became more apparent; the great numbers of the enemy were realised more clearly, and found more anxious consideration. Doubts arose as to the practicability of the designs formed. Side by side with plans of attack, proposals for defensive operations were made, and the closing scene was laid closer home, on the Loire, not beyond it.

There was, as a matter of fact, good reason for precaution. * Although the troops opposed to us were in no sense as good as those of the fallen Empire, yet the campaign proved, in December and January, much more serious than had been anticipated. In other parts of the theatre of war similar events occurred.

Happily, however, an equilibrium established itself. Whilst the justifiable caution of the armies entrusted with this task diminished the possibility of disaster, the more exacting wishes of the supreme command spurred them on to activity in a degree not to be under-estimated.

Now it might be said that the most original and boldest plans should logically originate round the green table at

* As the letter of guidance quoted on p. 113 shows us, this precaution met later, in the highest quarters, with complete approval.

home, where the direct influence of danger is completely excluded, and where the repose necessary for thought and work is greatest; that the presence of the commander-in-chief only appeared necessary at the time of decisive battles, and that then the senior general might reasonably be entrusted with the command. The telegraph, in the year 1870–71, could have conveyed orders from Berlin to Vesoul and Amiens quite as well and practically quite as quickly as from Versailles. Thus, under present conditions, an army might again be directed as in the eighteenth century by the Aulic Council of Vienna.*

We have experienced an actual instance in the similar procedure of the French Ministry of War. The latter drew up at the green table in Tours and Bordeaux plans of campaign, and sent them to the generals, without, for the most part, being in touch with the armies otherwise than by means of the telegraph wires. The delusion that it was possible to guide the fate of battles from the quiet of the study led, however, only to defeat. The designs of Gambetta and de Freycinet suffered throughout from a want of harmony between the wish and the power, between ends and means. In all these plans a just appreciation of the capacity of the young Republican troops was lacking.

If, accordingly, the supreme command of the army does well, as a general rule, to keep itself at some distance from the scene of actual combat, yet this distance must not be so great that intimate touch is entirely suspended. The general in command must always be in a position to feel the pulse of his army. Only so much of its inner emotions should ever reach him that, whilst not being unduly affected by passing impressions, he is able to form a fairly exact estimate of what he may demand at any given moment.

* We confine ourselves here, by way of historical example, to the popular idea of the functions of the Aulic Council. It has lately been questioned in Austria as to whether this authority, at least in the Seven Years' War, had any influence whatever upon operations; it is said to have been merely an administrative body.—*Cf.* "Mittheilungen des K. K. Kriegs-Archivs," May number, 1879, of the Austrian *Military Journal* (Streffleur), p. 8, *et seq.*

The presence of the great general head-quarters in the theatre of war tends to retain their plans upon the basis of reality.

It certainly is also appropriate that the supreme heads of an army should, on marches and in over-crowded quarters, get a slight taste of those hardships of war which the troops drain to the dregs. That will guard them against giving orders impossible of execution, and will often reduce to due proportions the importance of obstacles which look greater when viewed from afar than when seen at close quarters.

The same conditions apply equally to the battle itself as to great strategical operations. Commanders of high rank are rightly warned against approaching the fighting line too closely, though in this case, too, the proper mean of distance from personal danger must be struck.

Clausewitz has left us, in the second volume of his work upon war, an excellent sketch of the nature of the different zones adjoining the focus of action, which runs as follows: "If we accompany a novice to the battle-field, as we approach it, the ever louder roar of the artillery alternates with the whistling of the bullets, and attracts the attention of the inexperienced. The balls begin to strike before and behind us. We hurry to the hill upon which the commanding general, with his numerous staff, is posted. Here the falling of projectiles and the bursting of shells is so frequent that the serious side of life strikes the youthful imagination. All at once a friend falls—a shell bursts amidst a knot of men, and produces involuntary movement. We begin to feel that we are no longer perfectly calm and collected; even the bravest amongst us becomes somewhat perturbed. Now let us step into the battle which rages before us, almost like a play, and go to the nearest general of division. Here ball follows ball, and the noise of our own artillery increases the confusion. From the general of division we proceed to the general commanding a brigade. He, a man of well-known courage, keeps carefully behind a hill, a house, or trees, a certain sign of increasing danger. The shrapnels rattle in

roofs and fields, cannon-balls whiz in all directions past us and over us, and the whistling of rifle bullets becomes more frequent. Another step brings us to the troops, to the infantry, that has endured a hot fire of hours' duration with indescribable steadfastness. Here the air is teeming with hissing bullets, which announce their presence by the short sharp sound with which they fly within an inch of ear, head, and the heart, which beats with unbounded compassion at the sight of the wounded and fallen."

This sketch is true even in our own days; only that, in consequence of the greater range of modern fire-arms, the zones are considerably expanded. The increased effect of fire has also intensified the impressions produced. The thickest rain of bullets of olden times cannot for one moment compare with the mighty cone of bullets of our modern magazine rifles.

There are, as we have already stated, only very few men upon whom danger makes no impression. Clausewitz thinks that the novice would not enter any one of the zones of varying density of fire without feeling that the light of thought was here set in motion by other means, and was broken into other rays, than is the case in a state of mere speculative activity. Although the sense of danger may gradually become blunted, yet some particle of it still remains, even with the most seasoned soldier. The deeper he plunges into the fight, the more rapidly his pulse will beat, the more swiftly, though less clearly, will he think, and the more will his equanimity be disturbed by sensations centring in his own person and in the possibly impending end of life. Man has even nothing more precious to lose than his earthly existence, and takes supreme interest in its conservation.

The more, therefore, that clear-sightedness and intelligent direction in the development of a battle is demanded of a general, the greater the reason that he should keep out of serious danger. The best post for a commander-in-chief is one from which he has a clear view of the lines of advance

of his columns, as well as of the enemy's line of battle. Such places are usually found only at a considerable distance completely beyond the range of fire; but it would be an entirely false sense of honour to reject them on that account. By displaying his contempt of death, a commander-in-chief can scarcely effect more than any subordinate officer; but by clearness and cool deliberation in his plans, he will, on the other hand, become the benefactor of hundreds of thousands.

During the battle of Noisseville, on August 31 and September 1, the headquarters of the besieging army around Metz were stationed upon the Horimont, a precipitous spur on the left bank of the Moselle, about nine miles as the crow flies, and fourteen by road, from the field of battle. Originally it was only intended to take a general view from that point by means of the excellent telescope of the post of observation. But it was quickly perceived that no other position was so well suited for the commander-in-chief during the battle now beginning, and he remained there with his staff, whilst single officers were sent down to the battle-field as required.

Like a panorama, the whole country about Metz lay at the foot of the Horimont, with the clustering houses of the city and its suburbs, the fortifications, and the French encampments. All the movements of the enemy across the valley, the march into position of the besieged French army, its deployment, and its advance to the attack could be seen clearly. In the same way the progress of the German columns advancing to the field of battle could also be followed, and a singularly clear view of the position of both sides, like that of an umpire at a war game, was thus gained. It was not only possible to follow every phase of the battle, but counter-measures, suggested by the action of the enemy, could be concerted beforehand.

This battle, therefore, supplies an excellent example of successful co-operation between the supreme authority and the general commanding on the battlefield.

Prince Frederick Charles, the commander-in-chief, intended to leave General Von Manteuffel, who directed the fighting forces at Noisseville, the undivided honour of the victory; but even apart from this personal reason, his stay upon the Horimont would have been perfectly correct. In leaving that elevated point of observation, the commander-in-chief would not only have sacrificed his commanding view—and at the same time its telegraphic communication—but during the ride of several miles his activity would have been suspended.

A change of station during a battle is of itself productive of great inconvenience. It results in reports going astray; subordinate commanders looking for the commander-in-chief fail to find him, or only meet him when it is too late. A point, from which all the lines of advance and all parts of the battlefield can be surveyed simultaneously, is for the supreme commander of such great value, and is so seldom met with, that it should not be relinquished without the most urgent reasons, even though, owing to the great distance, some details may recede from view. If the course of events changes, and the crisis occurs elsewhere than was expected, the first position certainly loses, for the most part, its importance, and a timely change must be made. For instance, in the battle before Metz on August 31 and September 1, this would have been the case if the struggle had swayed away from the fortifications, and the attempt of Marshal Bazaine to cut his way through had succeeded. Prince Frederick Charles would not then have hesitated to proceed to the new scene of action.*

* The signal for this would probably have been the silence of the French fortress batteries. From the fact that the forts on the east side of Metz were unceasingly engaged in the struggle, it was possible, from the Horimont, to perceive that the scene of the battle was not shifting, but was still surging within its original lines. By the lines of smoke, which were plainly visible, its extent towards the flanks could be exactly judged; but advances or retirements could not be distinguished, because, from the position of the German commander-in-chief, the French, fighting on the other side of the valley, were in open view, while the German lines were visible only over their heads.

Narrower conditions alter the reasons governing the choice of position. The general in command of an army corps will only act in the same manner as the commander-in-chief when finding himself in a similar position—that is, when acting independently with his army corps. If, however, this latter merely forms a link of the line of battle, more prompt intervention and, accordingly, a closer view becomes essential.

Descending the scale to the grades of generals commanding divisions and brigades and commanders of regiments, the necessity of remaining close to the fighting area and within the danger zone increases. This is explained by the fact that, as a very wide field of view is now of less importance, facility for decided intervention, on the spur of the moment, is the more urgently demanded. The direct influence of visual impressions becomes even a fruitful source of activity. The subaltern officer, finally, dashes into the fire ahead of his men, carrying them with him by the force of example.

As is always the case in war, circumstances here also decide. But we must, at all events, grasp the fact that the judicious choice of a place of observation is a very material factor in the successful handling of troops, and that it would be a mistake to under-estimate the importance of this, apparently purely extrinsic, point.

Owing to the extreme importance of good leadership in the field, we must not omit to point out a dangerous tendency inherent in habits fostered in time of peace. Although lengthy orders are issued during our autumn manœuvres, individual orders convey little but hackneyed phrase, and that little refers to questions of administration and supply, rather than to the impending field operations; the real intention of the directing staff frequently remains hidden. The phrase "facing the enemy" has become quite a household word, leaving it open to question whether an offensive or defensive attitude be intended, though certainly also leaving an opening for escape from responsibility for blunders and from adverse criticism. From the point of view of the

troops, however, want of appreciation of the situation is apt to ensue, thus creating what would be a serious danger in real war. But in peace manœuvres help is ready to hand Reports arrive promptly and in large numbers, besides being more reliable than could be expected in war. Where doubts remain, the commander-in-chief and his staff are wont to approach very near to the opponent's position for a close personal reconnaissance, whereupon orders are issued with deliberate care. Such methods, however, are bound to fail utterly in actual war. Information there becomes scanty, and the necessity arises, not only of arriving at comparatively far-reaching decisions, but of also communicating them to the troops, in order that the latter may not remain in a state of suspense. The close approach to the position of a real enemy is, moreover, quite out of question. Head and heart flounder in a more difficult element, and that requires practice. Hence it should be insisted upon, even in time of peace, that the initial decisive plans be formed in the semi-darkness of a still obscure situation, and that ample orders be actually issued.

SECTION III

THE CONDITIONS OF SUCCESS IN WAR

We should do the best service to the cause of leadership could we but enumerate all the conditions of success in war; but as, unfortunately, we should never reach the end, let us be content to point out a few of the most important.

Among them may be mentioned first one which, as a rule, appeals but little to soldiers, that is politics.

Blücher wrote at the time of the Congress of Vienna: "Oh! ye politicians are poor judges of men: the good Vienna Congress is like a fair in a small town, whither every one drives his cattle, either for sale or exchange. We have brought here a first-rate bull, and have got in exchange only a miserable bullock, so say the Berliners." The old hero, from sheer wrath at the "politic-mongers," wanted to take his leave of the army forthwith; but even at that time his wrath did not in any way affect the great *rôle* which politics play in all matters pertaining to war.

War is the continuation of policy with weapons in hand; hence the influence of policy upon the conduct of war. If this influence be open to criticism, it were more correct to blame the policy itself. A bad policy will naturally have a pernicious effect upon war.

We must guard against a conception of policy in the narrow sense of the term, thinking only of what we commonly call external politics; internal politics being equally material. We will, accordingly, take the word "policy" in its widest meaning.

Upon policy the whole general condition, the temper, the constitution, the moral and physical vigour of a State depend; and upon these elements, again, the manner of making war.

Clausewitz says: "The enormous effects of the French Revolution are, it is evident, to be sought, much less in the new means and ideas of the French method of warfare, than in the complete modification of national policy and administration, in the character of the Government, in the condition of the people, &c. The other Governments, by regarding all these things in the wrong light, and thinking to hold the balance by obsolete means against forces new and irresistible, committed every error of policy."

It was a mistake of policy that Prussia did not, in the year 1805, when supported by powerful allies, appear with a numerous and well-equipped army upon the theatre of war to speak the decisive word. Though some defects still remained in its military system, its general condition at that time was so favourable that, given rational use of its forces, success would scarcely have been doubtful. But a mistaken policy not merely disregarded these advantages, but its evil effects went even further. The best and the most sagacious men in the Prussian army had certainly expected that at last an end would be put to the eternal waverings of the period of neutrality, and that Prussia would at last appear as an actor upon the stage of the world. When, therefore, the opportunity was allowed to pass by, the disappointment was more depressing than at any previous time. A sense of despair, a feeling of shame and hopelessness, took possession of many hearts. A sentiment spread in the army that honour demanded an early fight. The consciousness of having neglected the best opportunities increased the unrest of the Prussian military party, which eventually contributed greatly to the untoward crisis of 1806. A similar fate was that of France in 1870. The opinion that in 1866 a golden opportunity for consolidating afresh the prestige of France in the whole of Europe had been lost irretrievably, aroused the national pride, the force

of which drove Napoleon III., after a vain attempt to hush it in 1867, into the decisive struggle at an hour fatal to his destiny. Prussia in 1806, and France in 1870—two episodes in the history of neglected political opportunities—prove to us unmistakably the influence of policy upon war.

The fact of Prussia in 1806 entering upon a struggle for existence with its ordinary old-time military organisation, whilst the people were to act the part of passive spectators, was another error of political judgment. The existing military system might possibly have been equal to the task of coping with the French forces then on German soil, but could not hope to stem the tide of the national force of all France. Politics had placed most unusually large means at the disposal of France, and thereby facilitated an abnormal display of warlike energy. The first step of the Prussian State ought to have been to make similar national efforts. But for this purpose it was necessary that political wisdom should, a considerable time before the outbreak of war, have brought the nation into a condition of mind allowing of the employment of all its resources in war.

Clausewitz has most aptly explained the relations between policy and war.* In these days the aspect has changed somewhat in several directions. War has not freed itself from the sway of politics, though the influence of the latter is modified in comparison with former times. Clausewitz yet talks of wars, such as the Wars of the Coalition, or the War of the Austrian Succession, where allied Powers bound themselves to mutual support with a specified number of combatants, where operations were undertaken with a part and not with the whole of the forces, and the political element stood decidedly in the foreground; but all that is a thing of the past, such conditions are scarcely conceivable in our modern Europe. Even Russia's attempt in 1877 to crush its much weaker opponent, Turkey, with *a portion* of its forces, failed completely. Campaigns like the German-Danish

* "Vom Kriege," vol. iii. book viii. chap. vi. *Cf.* also Blume, "Strategie" (Berlin, 1882), p. 25.

campaign of 1864, or that of the English in Egypt, in which an expeditionary corps was sufficient to bring a weak but defiant enemy to reason, we regard as mere military executions. Even the war of the United States against Spain in 1898 bore this character. The Græco-Turkish war was also an exceptional one owing to the peculiar nature of the theatre of war and of the constitution of the contending forces. Such campaigns are not the proper field for our present investigations. The principles of modern war must be exemplified by great national wars. If two European Powers of the first order collide, their whole organised forces will be at once set in motion to decide the quarrel. All political considerations, bred of the half-heartedness of wars of alliance, fall to the ground. There remains, however, sufficient food for further reflection.

The causes of wars are of a political nature. We have already seen that wars are now only possible for the protection of great political interests. These interests sometimes certainly do assume a singular garb. A breach between nations is apparently due to a mere nothing. In 1867 the world might easily have witnessed the drama of a bloody struggle on a question of quite secondary importance. The candidature of a Hohenzollern prince to the throne in Madrid was no sufficient reason for a mortal combat between two nations like the German and the French. In all such cases, however, the true fact is that the apparent motive is really only a pretext for the political antagonism which has arisen from protracted friction.

We approach, in a certain sense, an original state of nature when wars between neighbouring nations were the result of pure enmity; but the difference now is that the enmity is not a purely instinctive one, but springs from the clashing of ideal interests, among which power and prestige figure very prominently. Both are political momenta.

Politics, again, determine the way in which war is begun. Had our policy been wavering, we might, instead of the actual events of 1866, have witnessed a struggle between

Austria and Prussia, in which the latter allowed herself to be driven back and kept on the defensive, in order to preserve Schleswig, where, in consequence, her armies would have been collected. If, in that case, Austria's conduct had inspired confidence, not only Lesser Germany, but France also, would have taken part in the struggle. A similar state of affairs may be imagined in relation to 1870, and how differently the military situation would have shaped itself, is easily conceived.

Policy, furthermore, regulates the relations not merely between the States immediately concerned, but also with those indirectly interested in the final issue. Their sympathy or ill-will may count for much, in either impeding or in promoting the action of a belligerent. Politics, again, as a rule, determine the moment for the outbreak of hostilities, upon the happy choice of which so much depends. They, in short, create the *general situation, in which the State enters into the struggle*, and this will be of material influence upon the determination of the commander-in-chief, and even upon the general spirit of the army.

In view of the swift march of modern military operations, politics will retire more and more into the background after the first roar of the cannon. In the wars of the previous century the Powers, even after open hostilities had already commenced, almost invariably kept part of their armed forces in hand for other possible complications, and politics decided whether the stake should be increased or not.* Now, all is staked on the first throw, and the lot of war falls as destiny wills.

Politics regain their influence only when it is felt that, in the case of one of the belligerents, the necessity of peace begins to slacken the ardour for a continuance of the struggle, and that all hope of the success of his arms is fading away. It will then be the business of the politician to

* Diplomatic intercourse between belligerents even still continued; for example, the English Minister in St. Petersburg was not recalled during the whole of the Seven Years' War.

prepare the basis of an understanding respecting the end of the struggle. The influence of third Powers, too, is occasionally invoked. They frequently determine how far the victor may proceed in his demands, and to what extent the vanquished must give way.

In the last stages of a war, when the decision by arms is no longer doubtful, the military element naturally recedes more and more before the political, and considerations of policy may even directly influence the decisions of the commander-in-chief. Political considerations may, under certain circumstances, bring about a final battle which, although no longer necessary from a purely military point of view, will be regarded on the one side as a last attempt, and on the other as a decisive means of coercion. One of the belligerents may not require this final decision in its own interest. A weak Government requires it in order to bring home to its own people the necessity for peace, even when it had no longer hopes of victory. What singular results may be produced by policy towards the end of a war was seen in 1871, when an armistice was concluded, whilst on another part of the theatre of war the struggle was still continued, just like the case of two fencers being allowed extra play, because their fighting humour has not sufficiently cooled down.

War is always the servant of policy. War waged merely for the sake of extermination and destruction is now quite inconceivable. An object of permanent value to the State, be it only a question of ascendancy, must exist; and this can only arise from political considerations.

The object itself of a war is of such importance and will so powerfully stimulate the exertions of nations for its attainment, that, almost on that account alone, we are tempted to place policy first among conditions of success. Now, as we have seen, there are many attendant motives, and thus we may unhesitatingly lay down the maxin that *without a sound policy success in war is improbable.*

War will, on that account, be in no way lowered in importance, nor restricted in its independence, if only the

commander-in-chief and the leading statesmen are agreed that, under all circumstances, war serves the end of politics *best by a complete defeat of the enemy.* By attention to this maxim not only is the greatest freedom assured to politics, but, at the same time, the widest scope is allowed in the employment of the fighting forces.

How closely politics and war ought to co-operate is manifest. This leads us back to the conviction already expressed that a State is most happily situated when commander-in-chief and statesman are combined in the person of a great king.

We have already said that every good military organisation has a definite national character, which will also be reflected in the action of the general and of his troops.

A writer upon strategy and tactics ought to treat his subjects as *national* strategy and tactics; for only such teaching can be of real service to his country.

As an individual, as a rule, only shows his true worth when placed in the right position, so also must armies be in their proper element in order to show themselves in the best light. The Prussian Grenadiers, who without dismay would advance in parade-step up to the enemy's batteries, at Jena lost their presence of mind completely when confronted by French sharpshooters, whose fire they could not resist. Napoleon's armies, which marched victorious through the heart of Europe, could not suppress the Spanish insurrection. Our infantry, which, in 1870, advanced victoriously through the rain of bullets of the French skirmishers and performed the most difficult feats of modern times, would, if transferred to the theatre of war in Acheen, Ashantee, or Zululand, most probaby require, at first, some experience in order to become master of the situation.

Our modern German fighting method aims at bringing on decisive results by a succession of vigorous blows in accordance with our conception of resolute offensive. An idea of the offensive is tacitly at the bottom of all our theoretical treatises, and, for the most part, of practical

exercises also. Temporising, waiting, and a passive defensive, are very unsympathetic to our nature. Our corps of officers are trained to spontaneous activity, to take the initiative, and to aim at positive successes. Everything with us is action, and our strength lies in great decisive strokes upon the battle-field. In the year 1870 all the conditions precedent to such a mode of operation were combined in the nature of the country, as well as in the constitution of our own forces and those of the enemy, and hence our brilliant successes. Whenever we meet with similar conditions we shall in the future also achieve more than if committed to protracted inactivity in camp and bivouac, or driven to drag on an indecisive defensive.

As a result of national characteristics, tradition, training and mode of life, each army has its own predominant sphere, and if compelled to abandon that, its efficiency will generally disappear. The improvised armies of the French Republic of September 1870, though offering us a very marked resistance behind the hedge-rows and in the plantations, hills and forests of the Sarthe district, effected but little in open attack upon our positions on the Lisaine. They were simply not made for the offensive, which was forced upon them by the higher authorities and by the necessity of doing the utmost to prevent the fall of Paris.

The feeling of not being quite in one's element, and the necessity of fighting in unfamiliar circumstances and against strange difficulties, acts quite as prejudicially upon troops as upon individual men. We must, therefore, count among conditions of success the importance of a *rôle* being assigned to an army which suits its peculiarities. Though not always within the power of the commander-in-chief, he ought to make it his constant aim, wherever circumstances permit, to give the utmost possible effect to the *national mode of fighting*, even if such action be bound up with some material disadvantages.

An important condition for the happy issue of a war is a good *internal disposition* of the army. Every regiment

brings into the field with it a certain character of its own.* There may be, however, gross exceptions from the general rule, and sudden manifestations difficult to explain. Discipline does not exercise an absolute control over internal emotions, over effects of panic, disaster, or casual unfavourable conditions. We can no more strike the word "panic" out of the military dictionary, than the terms "heroism" or "contempt of death."

The will to conquer is, in the case of the commander-in-chief, as also in that of his troops, of paramount importance. Victory and defeat are not separated so widely from each other as success or failure in an examination. The line between the two is very variable. Troops determined, like those of the Second Army at Vionville, on August 16, 1870, not to yield ground, are in the end regarded as victorious, even though the greater material losses are on their side. This obstinate will to remain victorious speaks most strongly of the spirit animating an army. The previous impressions of life in peace and war here co-operate to produce a great moral effort. The pride and the self-consciousness of the army, founded upon good traditions and successful generalship, secure success even under the most trying circumstances.

Besides these moral factors, we must also consider certain material ones. A happy equilibrium in respect of both tends to preserve the efficiency of the troops, and this itself is the best guarantee of eventual success.

One of the most important of the material conditions is undoubtedly a sufficient *number of effective fighting men.* Numerical superiority confers, at all events, the first right to expect success. A French proverb says, *Le bon Dieu est toujours avec les gros escadrons*, and history confirms the same. In modern times, when a single blow does not, as in the days of "line-tactics," decide the day, but when opposing forces devour each other in a struggle of long duration, a sufficient number of troops is of double importance. A

* See p. 59.

superiority of numbers confers the means of holding the enemy in check with equal forces whilst initiating measures for his complete destruction with the rest.

A clever general will often manage to paralyse the whole force of the enemy with a smaller portion of his own troops, either deceiving him by audacity as to his strength, or by involving him in a very difficult task absorbing large numbers. Again, where the numbers on both sides are equal, local superiority at a decisive point may be established, which brings in good interest, whilst the enemy has invested his capital badly. Such incidents display a certain gift of economy; we speak, in fact, of a wise *economy of forces* as constituting another condition of success, which may, partially at least, compensate for a deficiency of resources.

When speaking of the importance of numbers in war, we do not, of course, mean to compare a large and bad army with a small good one, but always two armies which are approximately equal in point of efficiency. That numbers can compensate want of efficiency in only a limited degree, is a matter of course; and we would not speak of it, if the theory of the value of numbers were not, as a rule, met by the maxim that not numbers, but the spirit animating an army, is its strength. In the winter campaign of 1870–71 we were shown that even a double and treble numerical superiority of young untrained troops of the French Republic was not sufficient to counterbalance the greater military efficiency of the Germans. Numerous but indifferently organised and badly trained armies, when engaged in a struggle with well-disciplined forces, may even find an element of weakness in the unwieldiness arising from their very numbers. Dissimilar things can never be brought into arithmetical comparison; and no sensible man, on seeing three rams confronted by a lion, would speak of the superiority of the former.

From the circumstance that Frederick the Great at Kolin failed to succeed with 30,000 men against 50,000 Austrians, as Napoleon did at Leipzig with 160,000 men against

280,000 allies, Clausewitz draws the deduction, that in our modern Europe it would be very hard, even for the most capable general, to wrest the victory from an enemy of double his own strength. "If ever we see double numbers of men place their weight in the scale against the talents of the best generals, we may not doubt that, in ordinary cases, both in great and small engagements, a considerable superiority, which need not, however, exceed the double, will be sufficient to ensure victory, no matter how disadvantageous other circumstances may be. We may, of course, have in mind a defile, where tenfold superiority would not avail; but in such a case we can no longer speak of a battle in the ordinary sense."

The method of fighting has since that time wrought no change in this respect, and we must even to-day take Clausewitz's indication as correct.

We thus arrive at the leading principle of modern war; *to show oneself, at the decisive point, as strong as possible.* To dispute the value of numbers is equivalent to denying this universally recognised principle.

Armament also figures largely among conditions of success. The bravest soldiers with lances and swords could effect little against breech-loaders and rifled cannon. There can certainly never be complete disparity between the armament and the *moral* of an army, since the latter includes intelligence, which takes care to provide good weapons. But untimely parsimony, technical mistakes, or obstinacy and false pride, which will not allow a weapon, once declared good, to be discarded, may, considering the rapid progress of our times, be productive of considerable inequalities. An armament corresponding to all the demands of the times is, on that account, all the more important, because the want of it immediately reacts upon the *confidence* of the soldier. Nothing is worse than that the latter should feel himself neglected in this respect, and to believe himself subject, without his own fault, to an effect against which he is powerless. Defeat would thus appear excusable, and success cannot have a worse enemy

than this feeling. When dealing with weapons, we include, of course, proper skill in their use, otherwise the effect gained would not correspond to their value.

Fighting formations are also of great importance. By force of habit they enter into the flesh and blood of soldiers; and if they fail when used in serious earnest, they cause more despondency than ought to be yielded to such a motive. Fighting formations are laid down by the regulations. It is accordingly necessary that a proper sense of the practical should prevail throughout. If mere considerations of spectacular effect or of faithful preservation of traditional usages prevail, the troops will, after their first experience of war, lose confidence and feel themselves insecure.

Having spoken of a wealth of combatants and material, we must now, in justice, appreciate *wealth generally* as a condition of success.

To make war we must have money, money again, and once more, money. Our modern wars, with their principle of the unrestricted use of all available resources, are not conceivable apart from the modern method of raising money by loans. The army of a great Power upon a war-footing costs day by day from eight to ten million marks. No State in the world is rich enough to store up a treasure to pay for its maintenance for several successive years. This can only be done by its credit. On the other hand one may say, with a certain show of justice, that so long as a State possesses credit, its defeat is not decided. If Germany puts its whole organised military force in the field, it has about two millions of men under arms out of a population of fifty-five million souls. There always remain behind in the country large numbers who, in case of necessity, could bear arms to defend their fatherland.* A similar ratio obtains in the case of the other

* Scharnhorst takes every fifteenth soul as a fighting man, and states that the Electorate of Hanover had even in the year 1759 with the Army one man for every fifteen souls of the population, and, in spite of this, kept its regiments up to their full strength until 1762. According to this ratio, Germany must now possess more than three and two-third million combatants.

great Powers, and we may assume that the material resources at the disposal of the executive power will be exhausted sooner than the resources in men. Whoever has weapons and money is not, as a rule, defenceless.

A very valuable pledge of final success is possessed by the party which can continue a campaign for a great length of time.

Money will not of itself be solely decisive, but rather the degree of facility in its employment. States which, in the event of war, hold command of the sea, have greater facilities of utilising their credit than those whose harbours are immediately blockaded. The former are in a position to make use of foreign industry for arming and equipping new armies. Without this means the Government of National Defence in the last Franco-German war would never have been able to put in the field the great masses of troops, by which it astonished the world. If Napoleon had been in a similar situation in 1814, the course of the war would have been different. The Southern States, in the American War of Secession, succumbed in spite of their greater military skill and efficiency directly their over-sea communications were cut. The command of the sea is, therefore, immediately productive of an access of strength, even though the fleets be not in a position to give direct support to the operations of the land forces.

Granted that wealth gives great strength, it will, nevertheless, only bear fruit if the people be willing to make sacrifices betimes. That tardy sacrifices cannot retrieve what has been neglected at the proper time was taught to Carthage by the fate of Hannibal, and it paid for its error with the loss of its freedom. Material and ethical motives here also work in common and are inseparable in the course of all operations of war.

In conclusion, all those conditions of success ought to be mentioned which are to be found in the appropriate use of the combatant forces. They will, however, be best explained in he following chapter, treating of the various phases of evolution and battle.

SECTION IV

MANŒUVRE AND BATTLE

1. *General Remarks.*

Evolutions and battle are, in these days, still judged of by the light of the campaigns of 1866 and 1870–71; for the Russo-Turkish war of 1877–1878 took place under exceptional conditions.* Owing to the nature of the theatre of hostilities, and the bad communications between it and the base of operations, as well as to the insufficient preparations made by both sides, phenomena were met with, in the Balkan peninsula as well as in Armenia, which remind us of far remoter stages in the development of the art of war. Protracted waiting in strong positions, combined with operations against the enemy's lines of communication, recall to us the time and period of the Seven Years' War.

As it could be perceived at the first glance that the frequent suspension and the disconnected nature of the operations were, in this instance, produced by special causes, our conception of a future campaign presents the picture of rapidly-progressing operations, the idea of decisions upon the battle-field following in uninterrupted succession, of a swift penetration deep into the heart of the enemy's country, and of a propitious peace thus speedily obtained. It was thus in 1866 and thus also in 1870; let us hope that it may be the same in future.

* More recent wars, such as that between Chili and Peru, the Serbo-Bulgarian war, the Civil War in Chili, the Chino-Japan, the Greco-Turkish, and the Hispano-American wars, as also the British operations in India and Egypt, cannot, for the reasons given on p. 139, be considered.

Such are the principles according to which good leaders should always strive to conduct any fresh war. This does not, however, necessitate that even in its external form modern war should again be like the old. In spite of all circumspection on the part of the generals on the Prussian side, the war in 1866 would perhaps have taken another course, had they not been supported by the greater internal efficiency of their troops, as well as by the superiority of their weapons. In the first period of the war of 1870, we were greatly favoured by our superiority in numbers, and in the second period by the inferior quality of the enemy's forces. Operations like the attack upon the lines of Amanvillers, on August 18, 1870, could not have been brought to such a successful issue as was the case, had not 200,000 Germans been opposed to 130,000 French. The defence of the position behind the Lisaine and Allaine, nearly nineteen miles in extent, which General Von Werder occupied in order to cover the siege of Belfort, would not have been attempted with 40,000 men against a threefold superiority in numbers, if these latter had consisted of good troops. It was only because the defenders had to deal with an improvised hostile army that the undertaking was rendered possible.

At the present day France, Austria, Italy and Russia, have eagerly followed the lead of Germany in military training. The internal efficiency of the troops of all nations will tend each day to become more equalised, till finally all will attain approximately the same level.

Before 1866 it was difficult to form a correct estimate of the Prussian army and the secret of its strength, for it had been trained without ostentation and unnoticed in its barrack-yards, on the exercise ground, and at manœuvres. Now, however, two mighty wars have convinced the world, and have made it familiar with the formerly unrecognised advantages of our military system. We shall not again surprise our enemies with it, but shall find them prepared for the peculiarities of our mode of fighting. Yet, it is very surprising that in France, in spite of the adoption of many

German institutions since the great defeat, no one appears to have had a thought of conducting a future war on our model, but apparently they rather intend to go their own way. Obstinacy of resistance, and the wealth and resources in the hands of the defender, can, under certain circumstances, paralyse even the boldest and most energetic attack. Starting from these premises, the most elaborate defence of the national territory was initiated at great expense of thought and regardless of the financial sacrifices involved. The sole attention of the army was riveted to this object, which also governed the system of military organisation and training. Every effort was for the time being to be devoted to the creation of a feeling of security within the frontiers of France. From a French work, treating of the war of the future, which appeared a few years back, we extract these words: "As yet the French are not strong enough to vanquish the Germans in their country, but we shall defeat them with ease on our own territory." Now that the primary object seems to have been attained, attention is again given to fostering among the troops the spirit of the offensive, with the view of opportunely joining the strength which it yields to the advantages of the carefully prepared defensive.

We have called attention to the extensive system of fortifications in France. Within recent decades its eastern frontiers have been provided with a girdle of fortresses and fortifications, leaving only isolated gaps, whose existence for definite military reasons is easily explained. The process of augmentation and improvement proceeds apace, and the problem of barring all the inroads from the east and north-east is practically solved.

The deeper-going and more general effect of such systematic fortification of territory consists more in hemming the pace of war, than in giving military engineers a better chance than formerly of thrusting themselves into the foreground.

We know how much an army requires in order to live and be provided with all necessaries, especially ammunition. It is not so necessary for the armies themselves, as for their

system of commissariat and supply, that a number of roads and railways should be kept open. A Franco-German war in the present day would accordingly begin with a series of battles around fortifications. If the girdle of frontier forts were broken through, a chain of fortified encampments would lend new support to the defence, and again hinder the free movement of the assailant. The latter's communication to the rear would be restricted to the single point where he pierced the belt of forts, and that would become a point of great moment, because at the same time the slow progress of the armies would render it difficult for them to live on the country. In a report on frontier fortifications which the French General de Rivière submitted to the Legislature, he declared that, in a future war, it was their intention to force the Germans to take a definite direction on their march into the country. This shows that the French not only perceived that the principal superiority of the Germans lay in a *war of rapid movement*, but that it was also difficult for France to catch up to us quickly enough in it, since this demands appropriate training and education of all leaders. Initiative and independence here play the greatest part, and these cannot be inculcated in a short time, but require the labour of years; and so it was determined to renounce them for a time, and to deprive the Germans of their particular element of strength by barring roads and bridges with impregnable works and thus forcing upon them a struggle within a narrow space.

As to the best way of overcoming these new impediments, opinions differed widely for a long time. One favoured a defensive on the Rhine, in order not to come too near to the prickly necklace of hill forts. A second voted for storming; that is, passing over a troublesome article by simply proceeding to the order of the day. A third thought of cutting in between the forts, leaving the reserves in rear to take them, in order thus to dispose the whole question. A fourth considered a short siege sufficient, whilst a fifth held a regular siege to be absolutely necessary.

The remarkable experiences of Plevna, where heavy guns of low trajectory proved powerless even against simple field works, stimulated a movement in favour of the long-neglected high-angle ordnance. Subsequent marvellous progress in the improvement of the latter, combined with the employment of high explosives, have gradually created the prevailing opinion that it would be possible to inflict sufficient damage on forts and batteries, in a short time and from a great distance, to render them valueless as serious obstacles. So far we have, however, only peace experiences to support this assumption, the correctness of which cannot, after all, be decided except by the test of actual war.

The means and methods of attack will, in reality, vary according to the condition of the attacking army and the character of its leaders. Pauses in the operations and interruptions in the advance must, at all events, ensue, and these do not only entail loss of time, but also enable the defender to bring up reinforcements and so to protract his resistance. Thus a second retarding element becomes apparent. There is no doubt whatever that war, where it has to reckon with such defensive works, will at times assume a dragging character.

In the East of Europe we meet conditions differing from those of the West. The frontier districts of Poland and Lithuania are also, it is true, prepared by great works for a protracted and obstinate defence. The works in question gain, moreover, additional strength from the presence of voluminous rivers and marshy lowlands; and all the more important passages are barred by defensive works. Nevertheless, the closure of the approaches is not so systematic and complete as in the West. Wide spaces remain open for the advance of invading armies, which would, at first, facilitate the continuous march of military events, till other circumstances combined to bring about conditions similar to those prevailing in the West. The vast extent of country and the comparatively backward state of the roads are bound to produce a periodical suspension of operations, either for the

purpose of restoring communication with the base, or to await a more favourable season. A war in the East would certainly not be decided by a single struggle, but would entail a succession of campaigns.*

Therefore, even though in a future war the leadership of our armies be just as capable and the bravery of our soldiers as great as ever, still we must be perfectly alive to the fact that it will not be possible to expect a similarly rapid course, and like fortunate and speedy results, as in 1866 and 1870. As King Frederick after the battle of Lowositz had to write to Marshal Schwerin, "We no longer find the old Austrians," so shall we, at the beginning of a future war, be obliged to confess, "These are different from our foes of former times."

It is certainly profitable to make that clear to ourselves, in order that we may not enter upon a future war with false expectations. Disappointment would surely follow such illusions, and this might shake the confidence of the troops in their leaders, although the slow progress of events is quite in accordance with the present nature of things. The labour will, in the future, always be harder, and the reward at first far scantier.

The element of mobility in war is further affected by the enormous increase in the masses of troops. Millions cannot be handled with the same facility as thousands. They cannot, above all, exist so easily wherever they wish to turn; and their employment is dependent upon a greater number of circumstances.

In the accounts of the campaign of 1866 we read, that one of the columns with which General Benedek marched from Moravia into Bohemia extended over a distance of no less than sixty-nine miles. It would, accordingly, have reached, as the crow flies, from Berlin to Magdeburg, from

* Properly speaking, therefore, Germany is the only country which furnishes a suitable theatre for an energetic war which is to be brought to a rapid issue. But it is, on that account, also our endeavour that it shall never again be the arena of war, but that it shall fight out all its quarrels outside its own frontiers.

Stuttgart to Anspach or Würzburg, or from Munich to Regensburg; and yet, in comparison with modern standards, the column was not very long. It consisted of three army corps and a division of cavalry, about 90,000 combatants. which do not cut any great figure in the numbers of the present, Nor was it owing to negligence on the part of the troops that they extended so far. Previous remarks upon the strength and composition of an army corps have already taught us that a force of the strength referred to, and marching upon a single road, actually does require such great length of road for its movement.

This instance gives us a fair idea of the scale upon which things are done in modern wars; but the picture can easily be more clearly developed. Let us suppose the present German army marching upon a single road. Each of the cavalry divisions, here also placed at the head, is three miles in length. The army corps are next in order. Even if all the columns closed up without intervals, rank upon rank, and wagon upon wagon, yet they would cover 460 miles at least. The numerous reserves, which take the field with them, must also be taken into account; next the heavy artillery of the field army. Besides all these, there are the personnel and trains of the various staffs; further, the administrative departments of the army so far as they are not included in the army corps, and many other details. To our astonishment, a computation of the whole would show us that if the head of the column were marching into Mayence by the Frankfort road, the last company would only just be able to leave Eydtkuhnen, upon the Russian frontier. The whole length of road from the Rhine to the Russian frontier would be thickly crowded with soldiers, guns, and vehicles. If these were made to pass out through a single gateway, day and night, it would take a fortnight for all to pass through.

Such masses of troops, when concentrated, would, of course, fill whole provinces. The Austrian army of 1866 required almost the whole of the Margraviate of Moravia to quarter

in, and the troops quartered farthest south had to make nine marches before reaching the head. In the year 1870, the sixteen German army corps, collected on the Rhine, covered 120 square miles of a very fertile country. For the whole of our present German army more than 200 square miles of country would be required, in order to quarter them, even though every place were full of troops.

Enormous, too, would be the length of front obtained if the gigantic armies of to-day were to be deployed in one single line. The French army would reach from Epinal to Verdun. The individual regiments would in no way be in loose touch, but, a considerable extent of ground being occupied by fortifications, would be pressed fairly closely together. The assailant would accordingly find little opening for rapid and surprising strokes, for turning movements and unexpected attacks. The freedom necessary for such movements and attacks can only be gained after certain preliminary combats, which are meant to mislead the enemy as to one's real intentions, and to cause him to concentrate his forces, now here, now there, leaving gaps in his line. It is sufficient to dwell on those numbers which, at first sight, appear almost incredible, in order to gain a clear conception of the difficulties in the handling of modern armies.

The evil is remedied in a certain degree by the formation of separate armies, reserve corps, and distinct groups for the execution of secondary objects. Nevertheless, even such formations are still large and comparatively unwieldy.

If we take the armies in the form which we consider most practicable, the strongest would consist of six army corps and three divisions of cavalry. Even though on forming up for battle a portion of the troops, say, two corps, were to be placed behind the front as a reserve, and another portion, perhaps a cavalry division, were detached on other service, four army corps would still be left in the first line. Each army corps requires for its proper deployment a space of considerably more than two miles.* This estimate was

* At present the normal fighting front of an infantry battalion is

confirmed by the experiences of the great battles in the war with France. Accordingly each separate army of maximum strength would occupy a front of more than nine miles in length. However, the formation becomes somewhat less dense on the flanks. Commanding points lying at the sides are drawn into the position; the cavalry divisions extend their scope, being pushed out beyond both flanks. Taking that into consideration, the front becomes considerably wider. The bulk of the artillery of the corps in reserve will also be drawn into the fighting line, which again causes this line to extend still more. Certainly, the strength of an army is reduced in the course of a war by casualties on the march and in battle, which, however, only affect the infantry; the lines of artillery will remain practically the same throughout.*

Eleven and a half miles of front for our greatest, and half of this for the smaller armies, consisting of three army corps and a division of cavalry, appears, under ordinary circumstances, to be a correct standard. On August 18th, 1870, the 7th, 8th, 9th, the Guards, and the Saxon army-corps fought side by side on a front of rather more than nine miles. On the evening of the day the second and parts of the 3rd and 10th German army corps were also absorbed into this line, but the ranks had been so thinned in the front by casualties of every kind that room was provided quite naturally. Days of battle with the troops unusually crammed together are now exceptions. Otherwise, not even in the closest bivouac,

taken at 225, of a battery at 75, and of a cavalry regiment in line at 300 metres. An infantry regiment of three battalions, formed in two lines, would thus occupy a front of 450, a brigade of six battalions 700, the division 1600, the army corps, if incorporated in an army about 3000, if independent, about 4000 metres. In the defence the fronts would become wider, that of an infantry battalion about 350, of a regiment about 700 metres. The width of front of an infantry brigade of six battalions is laid down in the regulations as at from 1000 to 1200 metres; that of an independent division would probably be 2000, of an independent army corps about 5000, and of an army corps in combination with other forces about 4000 metres.

* Some losses in guns, which cannot be immediately replaced, may occur; but considering the great number of guns taken into the field, this is of little moment.

army corps will never be so near each other. As, however, woods, meadows, bogs, and water are excluded, just the same as ground swept by the fire of the enemy's fortifications, the configuration of the theatre of war may, under certain circumstances, impose inconvenient limitations. The Franco-German frontier, for example, affords barely sufficient room for the proper deployment of the two armies.

Though the principles of modern warfare may demand the most rapid decisions, and though, perhaps, these principles may lead to bloody battles at the very beginning of the struggle, it is yet probable that the whole result will take the form of a severe contest, in which the combating armies, as followed on the map, either move but little from the spot, or, in comparison to the extent of ground involved, make but very insignificant progress. Only when, after the greatest exertions on both sides, a crisis supervenes, followed on the one side by inevitable exhaustion, events begin to move more rapidly. *It is absolutely certain that in a future war events will not march with anything like the rapidity peculiar to our last campaigns.*

The picture of the gigantic combatant masses will, at the same time, explain the statement that the duties of the supreme command of an army have become more onerous than formerly. With such columns on the march, such tracts of country, and such fronts, many things must naturally be withdrawn from the control of the supreme command, which must take things as they are, and must bow to the inevitable. The cheap critical wisdom which is so ready to declare a certain action *inconceivable*, would become very subdued if it were only for once to think out in detail the mere sketch here given, and reflect what great difficulties must arise under the military conditions of modern days.

The telegraph, which generally connects the commander-in-chief with the troops under his command, may, it is true, overcome both time and space, but it cannot equalise diversities of views.

Owing to the very fact that the masses of troops on the march must spread out greatly, the number of opportunities for an accidental collision of certain parts with the enemy increases. Whenever this leads to a regular engagement, the neighbouring troops rush from both sides to take part in the action. Thus a decision at arms takes place at a place where it was not intended, and in an hour when it was not expected; and it thus comes to pass, that, just in respect of the most important in war, *i.e.*, action and battle, the supreme command is least free, and most of all dependent upon the will of others and upon the caprice of accident. In most such cases it will have to accept the *fait accompli*, the battle being already far advanced when it first receives news of it.

This small power of control on the part of the highest commanders as to the moment for a tactical decision is an element of particular difficulty in modern warfare. The best intentions of the commander-in-chief are often baffled, and his most correct calculations brought to nought.

It will be replied, that the will of the commander-in-chief must be known to all his sub-commanders, and that obedience must prevent such untoward events. But as it is equally impossible in the field to order everything beforehand, as to forbid beforehand, the individual is bound to act whenever a ray of light illumines for a moment a part of the gloom. It would be the greatest evil that could possibly happen if, from anxiety or fear of going wrong, generals and officers were always to wait for orders from above. All favourable opportunities would thus be lost, and the enemy left the upper hand at once.

Even in the rare cases in which great decisions are foreseen and provided for, as on the days of St. Privat and Sedan, the commander-in-chief can only launch his masses upon the enemy in the direction in which they are to act. More than this there is but little for him to do, except to say, with Mark Antony:

> Now let it work: Mischief, thou art afoot,
> Take thou what course thou wilt.

When six, eight, and ten army corps, with just as many hundreds of guns, fight between woods, rocks, hills, valleys and villages, the field of view is too restricted for a single eye to observe closely the progress of every event, or for the will of a single individual to be the sole ruling power. The course of a great battle, the conduct of which is the most difficult task which can possibly fall to the lot of human genius, presents itself to us as being, more than the several operations, the product of many wills and intelligences, to which the supreme control can merely give the direction which causes all to converge towards the ends to be attained.

2. *The Importance of Discipline in Movement and Battle.*

He who presents to his mind the size of our modern armies, will ask himself rightly how it is possible to lead such masses; the reply is, that discipline makes them moveable and amenable to control. There is no better solution of the problem. But the word "discipline" embraces so many interpretations, that its meaning appears rather vague and to need a more precise explanation.

We generally understand by discipline that regularity and order which is maintained by the prompt application of a strict law. Yet one may object that strict laws and regularity and order do not develop in equal measure. There have never been better disciplined armies than the German armies during the late campaigns. Nevertheless, they were governed by the mildest codes with which great martial hosts ever took the field. These laws were, moreover, applied against the offender in the most humane manner. There are, on the other hand, many examples in ancient and modern history, where Draconic severity and want of discipline went side by side. The French Republic of September 4, 1870, had a bullet ready for every disobedient soldier, and in their armies military executions were no extraordinary occurrences; still, their discipline was, and remained, lax. The actual condition of things was a natural one. All laws arise

primarily from the conditions existing, and only re-act upon them after a time.

On the other hand, we must not believe that in a civilised people discipline is a matter of course, and that it simply proceeds from a civil code of morals. For this the tests applied to it are too hard. In the army of a civilised people, crimes must necessarily be more rare than among the hosts of a barbarous tribe. But discipline demands more than mere negative services. It demands of the soldier that he stakes his life in order to vanquish the enemy ; it expects from him something extraordinary, and is to make this extraordinary demand so familiar to him, that he considers it unavoidable, and more than this—even natural.

The best explanation of discipline and its marvellous power is found in the saying of Darwin, contained in his *Descent of Man* : "The superiority which disciplined soldiers show over undisciplined masses is primarily the consequence of the confidence which each has in his comrades." This absolute confidence is, beyond all doubt, the prime means by which discipline works, and it most appropriately explains what we really understand under this trite word.

First of all, we require a code sufficiently rigorous to make the fulfilment of all higher commands appear as something inevitable ; "The power of the passions cannot be restrained without the help of law," is a saying of Scharnhorst. Disobedience, whenever it shows itself, must be punished promptly and adequately. It would be a fatal illusion to consider the rigorous enforcement of the law as something with which we could dispense. Such strict application of the law is the foundation of discipline, and it is of even greater importance that the necessity of obedience bear equally on high and low in the army. Example is far more effective than a written or a spoken word. As the soldier sees his superiors obey, so does he always follow their lead. Submission to a superior, who commands something at the moment, is not everything, but this habit of obedience should be manifest in all pertaining to the service. Nothing should be more sacred to the

soldier than the calls of his profession. Simple duties are more easily understood by the private soldier than the higher obligations.*

The seriousness with which, since the days of old, so-called "minor duties" are performed in the German army, is in no wise merely the result of tradition or idle pedantry; it pursues the ethical aim of creating in the soldier an idea of duty, in a manner best suited to his intellectual capacity. This faithfulness in little things must certainly not confine itself merely to the parade portion of military life; but the many apparently insignificant details necessary to the making of the man as a soldier are also entitled to special notice. Constant exhortation to cleanliness, to love of order, to punctuality, to painstaking, to love of truth, and to absolute fidelity is the most powerful factor in the formation of discipline.

Hitherto the custom has been adhered to of assigning to regimental officers a share in the minor administrative duties, particularly those relating to the clothing and messing of the men. Economical considerations are not the reason, but the sole object is to make intercourse between superiors and subordinates more intimate, and to strengthen the influence of the former. Work in the clothing store, in the quarters of his soldiers, and in superintending cellar and kitchen, make the captain of a company the rampart and pillar of discipline, and the father of his troops; and it is a significant expression of naive feeling, that the soldier prefers to call him "the old man," although he sees daily officers of greater age performing duty in the higher ranks.

This peculiarity in the life of the German army, besides creating the idea of the necessity of faithful performance of

* Hence the value of the institution that the officer, in our army, begins his career just like a private soldier. He must first learn to obey, in order to be able later to command; that is, to command in a correct manner, and in one that can be understood by the simple senses of the private. Moreover, he here learns the lowest duties, which are far removed from him later, but according to the knowledge of which he is still principally judged by his subordinates.

duty, has also produced a sense of common interests. Therein lies up to this day the strength of the army. The most cordial relationship has arisen between officers and soldiers in the course of common and serious occupation.

Every man in the ranks knows from experience that his officer does not, under any circumstances, leave the company to which he belongs, and that his company resembles a family with the same interests, and that, like it, it will hold together firmly in the hour of danger and distress. Thence springs that confidence of which Darwin speaks, and in which the great judge of human nature finds the superiority of disciplined armies. With composure the soldier presents his breast to the bullets of the enemy, being convinced that his comrade does the same, and that his commanders are in the lead, and he may not leave them in the lurch.

This inward force, exercised by a feeling of relationship, will endure, when order produced by law fails, because the excitement and confusion of battle render control impossible. Duty and honour, then, unite in the heart of the soldier in the firm resolve not to remain behind his fellows.

For this reason, in our late wars, any part of the army dared to attack an enemy of superior numbers without hesitation, whenever it appeared to be advantageous for the whole, or the moment offered a favourable opportunity. Every general who made a bold venture was sure that the corps nearest him would hasten to his assistance as soon as they heard the roar of his guns, and that the work, initiated by himself, would be accomplished, in case of necessity, by his fellows, if his own strength should not suffice. Down to the youngest officer at the head of his section, all commanders were accustomed to think and to act thus. It is apparent what an access of strength thus accrued to the German army generally. This also explains how the supreme command, in spite of its limited influence upon the course of actions and battles, was yet enabled to enter into these issues with unqualified confidence. It knew full well that, although the means might differ, all the forces let loose were striving in common zeal

towards the one end, namely, to come up to the enemy. It might well be convinced that no commander within reach would remain away from the scene of the sanguinary strife. The discipline of the German army guaranteed this.

This then is the real means of making armies mobile, and the greater their numbers, the more efficient discipline must be. Hence we are now in greater need of it than ever; but to be effective, it must be conceived in the right spirit, and must identify itself with the complete community of all in their ideal aims, in fidelity to duty, and in devotion to the service of king and country.

If, accordingly, the good discipline of an army be based mainly on a moral foundation, yet, to maintain it, purely external conditions may not be disregarded. We ignore the fact, that intolerable conditions in times of war, exertions exceeding all human strength, the overpowering impressions of battle, and hunger and distress, may finally destroy the best discipline in the world, and that objectless hardships and losses have a particularly demoralising effect.

Important conditions affecting the preservation of discipline lie in the existing military organisation.

One of the foremost is due regard to the preservation of the usual peace constitution. A sudden severance of the tie uniting various bodies is bound to have an injurious effect on discipline, and the disadvantage thus created will generally outweigh any advantage gained by a redistribution into an increased number of units. *

Considering the feature of family life obtaining in our army, such severance of ancient ties would be particularly ill advised. It lies in the very nature of our military constitution that a commanding officer should feel greater confidence in, and exert greater influence over, his own regiment or battalion, or a captain over his squadron or company, than over a strange body of men assigned to him

* It is well-known how much discipline in the Danish army was injured by the decision of the Minister of War, taken on the eve of the campaign of 1864, to break up all the battalions in order to double the number available for the war.

on the outbreak of war. Inversely, the soldier will yield readier obedience to a superior known to him than to a total stranger. It is to be regretted that the many new formations inevitable in case of mobilisation necessitate great changes of personnel as it is; the greater, therefore, the urgency of the greatest admissible moderation and of due precaution against separating men from their commanders for secondary reasons. The preservation of existing connections is a matter of such importance, that minor strategical and tactical considerations should not prevail. It may safely be assumed that, as a general rule, a regular regiment of three battalions will render considerably greater service than three battalions drawn from different regiments and only temporarily placed under the one command.

Where such composite formations include men of different army corps, provincial diversities will also come to the surface occasionally. One racial element in the German army requires to be dealt with harshly, another with leniency; the one requires to be treated with rigour, the other in a friendly manner. This one is spurred on by a timely reproach, while another is fired most by generous praise. Considerable divergence of character exists between the Berliner or Brandenburger and the Westphalian, between the East Prussian and the Rhinelander. The commander of troops in war must have known them in their life in times of peace; he must understand how he has "to take them."

It is of great importance in the interests of discipline that on mobilisation reservists should rejoin the same unit in which they originally received their military training. Here they will meet old acquaintances, comrades and superiors, with whom they will soon be on good terms, and will find conditions once familiar, and to which they will readily readapt themselves. All share in the reputation and well-being of even this particular community, to which they were always proud to belong. They are thus animated by that *esprit de corps* which tends to produce noble emulation between units.

The varied exigencies of mobilisation will certainly render it impossible to restore all reservists to their old units, but this should be done as far as possible.

Tradition and *esprit de corps* can only develop when officers in one and the same regiment do not change too frequently; this applies in a particular degree to commanders of companies, squadrons, and batteries, in whose hands the training of the men lies. It is, furthermore, essential that the peace establishment of units should not be unduly low. The corporate body must have an imposing outward appearance if a definite tradition is to live in it.* Fairly large numbers are also indispensable for various reasons of training. Companies and battalions on a low peace establishment lose their independence, since they are unable to represent at manœuvres the work of a corresponding unit in the field. That leads to the pernicious expedient of combining several and assigning them to one of the commanding officers present, as is done in various European armies even to this day.† In our case that would, however, mean the breakdown of the fundamental principle of training, discipline, and order, which consists in the personal responsibility of every superior for his charge. Individual interest, personal influence, and, as a natural consequence, discipline too, would be diminished.

Still another kind of discipline is requisite, which might be termed intellectual, in contradistinction to moral. Intelligence, if allowed to work in an army without rule, renders command extremely difficult, a condition which has been the frequent misfortune of improvised armies.

* See Blume's "Strategy." Chapter on "The Training of Troops," pp. 67, *et seq.*

† With us, too, several peace units are occasionally combined to form bodies of troops at war strength, in order to afford officers an opportunity of practice in handling them. Such combinations, however, are exceptions and not the rule. On the whole, the practical value of such exercises may not be over-rated, since in the field the various units will remain at full war strength only during the initial period. Later on, owing to casualties of every kind, all will soon approximate to the strength of the peace establishment. This was the normal condition during five of the six months of the war of 1870–71.

In militia and volunteer organisations, who are called out in the hour of danger, there is, generally speaking, no lack of able and educated men in the higher ranks. The best men in the nation, who would otherwise have remained strangers to military service, feel bound, under such circumstances, to respond to the call of their country. The armies of the French September Republic numbered many members of the highest aristocracy in the lower ranks, and there was certainly no lack of intelligence; but it was an undisciplined intelligence, wanting in uniform training; hence also an absence of unity of action.

This latter is guaranteed by a uniform system of training. By this we do not mean that the scope of a commander's activity must necessarily be defined by rule; war does not tolerate schedules. Yet there must be a certain uniformity in the manner of performing given tasks, and this is obtained by certain general principles being engrafted into the flesh and blood of the commanders of troops by teaching and practice.

Such principles should be embodied in regulations as general leading points in regard to action, similarly as in letters of guidance relating to particular cases in the field. Good leadership cannot exist without strict schooling, since thus only it is possible to ensure that given tasks are executed by all officers on similar principles, though the methods employed may vary. In the case of theoretical problems set in time of peace, the solutions supplied are most diversified; but it must be remembered that these problems are mostly devised as tests, *i.e.*, expressed in terms intended to create doubt. In war, everything becomes more simplified. When, in 1870, the German armies were massed on the banks of the Rhine, it is scarcely possible to imagine that a general could have been found who would not have decided on an immediate offensive against France. The idea of utilising our numerical superiority and the efficiency of our troops in a vigorous and rapid offensive pervaded all our minds, this principle having been imbibed with the very air of our military school.

If such discipline of the intelligence exists, the commander may, with composure, leave much to the initiative of the individual. He will feel assured that in places beyond his personal control, something practical will be done, and in harmony with his intention, *though not perhaps exactly what he would have done himself.*

Uniformity in mental training will, moreover, only be possible where the whole body of officers is of the same social status. This condition naturally does not obtain in armies whose officers have partly risen from the ranks and partly graduated from military schools and academies; among such, perfect unity of action will never be assured.

3. *The Strategical Concentration of Armies.*

The opening of the campaign is preceded by the concentration of troops on the frontier threatened. The importance of a correct concentration of troops grows in proportion to the numbers of the combatants.

The work of the Great General Staff upon the Franco-German War expresses itself on the point as follows: "Mistakes in the original massing of the armies can hardly be retrieved in the whole course of a campaign." Now, at the first glance the correctness of this saying may appear doubtful. One would think that much more depended upon the issue of the first battles and engagements, which, in case of necessity, would afford the chance of quickly rectifying mistakes committed in concentrating the troops. The history of war does not lack instances of campaigns, begun with the most unfavourable operations, taking a complete turn for the better after a single successful battle. We need only remember the dilemma of Frederick the Great in the Silesian campaign in April 1741. Field-Marshal Neipperg completely surprised the young king in Upper Silesia; by his advance upon Neisse, he cut him off from all his communications, threatened his magazines and his reserve artillery, and compelled him to fight a battle with his back towards the enemy's country, so that he would have been irretrievably

lost if he had not been victorious. A more brilliant opening of the campaign for Austria, and a worse look-out for Prussia, is scarcely possible to conceive. But at Mollwitz the better training of the Prussian infantry triumphed, and the most sudden change occurred. At one stroke Frederick became master of the situation. It appears as if all strategical conditions had been completely without any influence whatever. We receive similar impressions, if we contemplate Czaslau, Hohenfriedberg, and Leuthen, in their connection with the events preceding them.

Yet all these instances, without exception, must be relegated to antiquity. Modern war is characterised by the close reciprocal action of manœuvre and battle. That even to-day a campaign badly begun may suddenly, by a single victory, take a favourable course, is certainly not impossible, but it is in the highest degree improbable. In view of the composition of the armies, the vast extent of country over which they spread, and the independence of the several component parts, the preliminary movements will always already lead to collisions. These movements can only take a favourable course if successful engagements be fought; as the entry of our armies into Bohemia, in 1866, was followed immediately by our successes at Nachod, Skalitz, Soor, Schweinstradel, Podol, Münchengrätz, and Gitchin, and the march of the Germans into France, in 1870, was attended by the victories of Weissembourg, Wörth, and Spicheren. The better strategical position of one side proclaims at once its tactical superiority also. A faulty concentration results in the forces not being at the spot where they are subsequently most required, in consequence of which it will not be possible to achieve the successes necessary to improve the general situation. Therein lies the far-reaching effect of errors committed in concentration. Where the opponents are equal, such errors will in most cases decide the retreat of the one and the advance of the other. The best instance is given by the Austrian campaign in the year 1805. The strongest army of 100,000 men, composed of the best regiments, and

under a most experienced commander, the Archduke Charles, was sent to Italy, where, as in 1796, 1797, 1799 and 1800, the most important decisions were anticipated. Only 70,000 men under Archduke Ferdinand and Mack remained upon the theatre of war in Germany, when Napoleon arrived with superior numbers by forced marches from Boulogne. The great catastrophe of Ulm was the immediate consequence. This could not be compensated by the victory gained by the Austrians at Caldiero in Italy. Even though the mistake was soon perceived, and Archduke Charles recalled to Germany, yet this could not alter the issue of the war. The battle of Austerlitz ended it before the Archduke could strike a blow for Austria.

The original massing of the French armies in 1870, in two distinct groups before Metz and in Alsace, was done with a view to a rapid offensive movement into Germany, which they neither possessed the means to accomplish nor even seriously entertained. The wide separation of the two armies, after the first disasters had rendered a junction imperative, compelled a long retreat. MacMahon's retreat to Chalons, and Bazaine's early investment in Metz, were the result, and the latter event led to the march upon Sedan and the catastrophe of September 1. The connection of the severe defeats, which were inflicted upon France in the first period of the great war, with the original strategical disposition of the troops is easily traced.

The concentration of the armies takes place at the moment that policy decides on recourse to the sword. Hence not only military, but political considerations also, must be weighed, after which questions of commissariat, quartering, geographical conditions, lines of communication, and roads demand attention.

No state will immediately at the outset of the war be willing to give up a threatened province, even when military reasons would make this appear to be desirable. The theory of war has certainly laid it down that such sacrifices must be made without hesitation when higher interests demand it.

When the conduct of war was exclusively dependent upon the sovereign will of an absolute monarch, this may have been correct. In our days the courage, strength, and confidence of the whole nation, as well as its national credit, play too great a part to allow of this theory being adhered to. Let us only present to our minds the impression produced, if a war of Germany against France began with the surrender of the left bank of the Rhine, or a campaign against Russia were to open with the abandonment of Prussia to the banks of the Vistula.

The motives which might justify these measures in the eyes of soldiers would be hidden from the masses, which will invariably fall into a condition of extreme uneasiness if considerable tracts of country were abandoned by their own troops, and surrendered to the foe, without apparent necessity. The voluntary abandonment of a province means a simultaneous surrender of its resources. If the enemy is in the position to occupy it, it must, even if the course of the war is favourable, be retaken before the conclusion of peace.

After the ill-starred campaign of 1806 wise critics asserted that the Prussian army ought immediately to have retired before Napoleon upon the Oder, in order to effect a junction with the Russians. Even if Saxony had become disaffected and many troops had deserted in the course of the long march of retreat, yet the balance of numbers would have changed in its favour. That is quite correct. But even if Napoleon's attack upon the line of the Oder had not succeeded, the Emperor meanwhile would nevertheless have been master of the best Prussian provinces, and the Prussian army would have been obliged to win back its own territory before arriving at the point where it was before the outbreak of war. Hence the attempt to maintain it from the first deserves no blame whatever. The Latin proverb, "*Beati possidentes*," is equally applicable in war.

For the same reason, Frederick the Great, in 1757, remained in occupation of East Prussia as long as he

possibly could. During his various campaigns in Lusatia and in Bohemia, he was always bent upon the security of Upper Silesia. The same occurred in 1805, when the Prussian army concentrated in Thuringia and Franconia, but left an army corps at Glatz and Neisse. In 1866, too, one of the Prussian armies concentrated there, in spite of the fact that the march into Bohemia in the direction of Gitschin had already been decided upon.

Protection for threatened provinces is one of the necessary considerations from the first moment of the concentration of the armies.

This is not, however, to be construed as necessarily a direct occupation of the frontier line. Very frequently it will result indirectly from the proximity of a great army, which makes the advance into the denuded tracts of country so dangerous to the enemy, that he abandons the idea. If an immediate offensive be decided on, the effect of this movement will very soon secure one's own adjoining territory. The enemy can also, as a rule, only despatch inconsiderable forces to distant provinces. Therefore, reserve and Landwehr troops, or even general levies of citizens, may be entrusted with the duty of guarding them. For instance, in the year 1795, when war with Russia appeared imminent, the minister Von Schroetter proposed to defend East Prussia, a province covered with lakes, hills, and woods, with a "Landsturm" of fifty to sixty thousand men, supported by a few fortified points.

The portions of the active army charged with the protection of the frontier during the process of concentration may only in quite exceptional cases be withheld thereby from participation in the great general operations. But if they at the same time arrest the progress of one of the enemy's armies, as did the corps of Field-Marshal Lehwald during the seven years' war with the Russians, or divert great masses of the enemy's troops from the critical spot, as did Massena in Italy in 1805, they may be left detached from the main force, as, in such a case, they pay full value. In other

circumstances they must, however, always be posted so as to facilitate their timely movement to the decisive point. This was the case with Schwerin's division in 1757, when King Frederick invaded Bohemia, and was repeated in 1866, with the army of our then Crown Prince, at the beginning of the Prussian operations.

It is, then, essential to secure the integrity of one's own territory, but always with due regard for the co-operation of all forces in vigorous offensive action.

The transition from a state of peace to one of war will not always be as sudden as in 1870. In spite of all possible expedition, the concentration will take up a considerable number of days. The massing of great bodies of men and horses always entails manifold difficulties. Good quarters are not the sole consideration, but the question of commissariat demands even greater attention. Even though the troops bring some provisions from their home country with them, yet it will not be possible to dispense entirely with the resources of the district wherein the troops are being concentrated. It is certainly an invaluable boon, if they are well quartered. Immediate steps are also taken to form magazines. Purchases of supplies on a great scale must be possible either on the spot or in the neighbourhood. The railways serve principally for the transport of troops. Rivers leading from important centres into the concentration area are excellent auxiliaries. That the massing of troops can be more easily effected in a rich country, covered with a network of railways and roads and rivers, than in a poor and barren district, where special arrangements may be necessary, is quite evident. *The natural features and agricultural conditions of the territory, where the massing of the troops takes place, must therefore be carefully considered.* A vast number of combatants cannot, of course, be concentrated where fordless rivers, or hills, or trackless mountains would delay their subsequent movements; but this consideration is for the most part met by the fact that no great arteries of traffic lead into such districts, and that they are

thus out of question for the massing of considerable bodies of troops.

The influence of politics upon war was demonstrated in the year 1877. If Russia had been able to rely upon Austria as upon Roumania, it would have been in a position to have massed its Army of the South on the Danube, instead of on the Pruth. No great fears need apparently have been entertained of an offensive movement on the part of the Turks across the river, to disturb that concentration. Consideration to be paid to unreliable neighbours, to faithful allies threatened by danger, to wavering Powers whom we wish to carry away by the prompt offer of a powerful protection, and to neutral territory, respect for which is enjoined by prudence alone, bear weight in all concentrations.

But the position of the great lines of communication leading to the districts chosen for the concentration, especially that of the railways, is of supreme importance.

It is readily conceived that the belligerent who completes his concentration first holds a great advantage over the other, since he can begin to move his forces and impose his will upon his opponent. Where the forces are approximately equal, he will also score the first successes, gain in *moral*, gather confidence, and command that of others. He will, in one word, dictate the law himself, instead of receiving it from others. Having acquired initial ascendancy, there only remains that he should know how to make the best use of it, in order to assert it permanently. The race between great modern armies in mobilising their forces on the frontier is thus explained. In this race the timing is no longer by days, but by hours. It is, therefore, of the highest importance for strategical concentration to use as many railways as possible, if possible all leading in the direction of the theatre of war. The plan for the concentration will, indeed, start from this point, since the question how the troops are to be brought up to the frontier on which they are wanted, is naturally the first.

Once the extraordinary importance of the rapid completion of strategical concentration is recognised, its connection with

the *mobilisation* of the army also becomes patent. No regiment is capable of marching out immediately upon a complete war footing.* The reservists must first of all be recalled to the colours, each one to his own particular sphere of action. Hundreds of thousands—perhaps a million—of men will suddenly be torn from their firesides and set hastily in movement; and all details must be most precisely arranged beforehand, if a serious confusion is to be avoided. The mobilisation of the line regiments is least difficult; on the contrary, everything works with comparative ease. But numerous departments and other special branches must be newly formed. The first reserve, the garrison and depot troops, the staff of separate armies, administrative staffs of occupied territory, the inspections of, and commandants on, the lines of communication, most of them with special staffs, composed of members belonging to various branches, are only formed on the day of mobilisation. All the columns and trains must be filled up, and horses and the waggon parks newly organised. *Intendanturen*, the commissariat, field-bakeries, post-offices, telegraph staff, the paymaster's, the legal, sanitary, and chaplains' departments, must also be formed.

Commissions of all kinds are appointed. Men have to be clothed and armed, officers and officials furnished with horses, depôts formed, supplies purchased and collected. Fortresses threatened by the enemy must be put into a state of defence and provided with full military garrisons, officials, and all requisite organisations. Peace transactions must be wound up, or be handed over to officiating officers; records and registers must be placed in safe custody for the period of the war. The office service for the army in the field must be arranged and made efficient. Men, horses, and *matériel* of war must be forwarded by rail to the place where they are required. The transports to the frontier soon

* Disregarding units specially detailed to proceed to the frontier within a few hours of the issue of orders for mobilisation as a first frontier guard. Such units do not proceed at full strength, and complete to war strength in the presence of the enemy.

afterwards begin. All this has to be accomplished within a few days. In the year 1870 mobilisation was ordered on the night of July 16; and as early as August 4 the frontier had been passed and the first victory won. Nowadays we wish to be quicker still. A work must be accomplished which not only requires long and careful preparation in time of peace, but which in the moment of execution also sets the governmental and administrative machine in feverish activity, and makes it put forth its utmost energy, which even affects the whole of the nation. All private interests are deeply concerned. The days of mobilisation are days of great excitement and exertion for every one. "The mobilisation of an army, under our modern conditions, is a safe index of the value of the whole political organisation and the spirit of a people," as Colonel Blume rightly says.*

Owing to the number of authorities concerned in the work of mobilisation, it is advisable to spread a more general knowledge of the procedure. While the details of the preparation for the transition of the army from a peace to the war-footing were still the exclusive property of the Prussian army—handed down from the time of Frederick the Great, and since improved on—some justification existed for secrecy. Since, however, the system has become the common property of all great armies, who mobilise on practically the same plan, there remains little to hide. Simple rules in the form of a handbook, as now published officially or semi-officially in France, are therefore quite in order. If such guidance be withheld, many persons required to assist in the work of mobilisation will be left in ignorance of their most important duties, without any compensating advantage whatever.

The result of the mobilisation—numbers, composition, distribution, and employment of forces—must, of course, be concealed and the secret carefully guarded.

Both requirements are, however, quite readily compatible.

The plans of the supreme commander are mere castles in the air, without good preparation for rapidly placing the

* Blume, "Strategie," p. 66. Berlin, 1882.

army upon a war-footing. The enthusiasm of a whole nation cannot replace a deficiency in this respect. The example of France in 1870 is before us as a warning. At that time the numerical superiority of Germany was known in Paris, and it was thought to neutralise this superiority by boldness and rapidity. The idea was a good one. The whole people, carried away by wild martial ardour, demanded energetic measures—a material aid to an energetic *régime*. But for the purposes of putting them into execution it was needful, above all, that the Germans should be outdone in the rapidity with which the armies were massed; instead of which, however, confusion and stagnation made themselves felt from the first. The boldest plans would have been impotent. The machine refused to work.

Some of the telegraphic cries of anguish, which flowed into the French Ministry of War upon all the wires from helpless subordinates, are well known:

"9000 reservists here, I do not know what to do with them. In order to make elbow room I shall send them all to Algiers, upon the transport ships here in the harbour": the territorial commandant at Marseilles reported.

"How far have you got on with your formation? where are your divisions? The Emperor orders you to hasten their formation in order to join Marshal Macmahon as quickly as possible." With these words the major-général of the army, who had till then been Minister of War, addressed himself to one of the commanders of an army corps.

"Send me funds to enable me to provision my troops; there is nothing in either the public treasury, or in that of the corps," a general was heard to say.

"In Metz there is neither coffee nor sugar, no rice, no brandy, no salt, only a little bacon and biscuit; send me at least a million rations to Thionville," telegraphed the commissary-general to Paris. The quartermaster-general of the third army corps reported at the very moment when his troops should start, "I have neither nurses nor ambulance waggons, nor officers, nor field bakeries, nor train."

And so it went on. Haste, mistakes, deficiency, disorder reigned supreme, whilst the mobilisation of the German armies was accomplished with an almost silent calmness. These latter broke into the country over the frontier before, on the French side, the first step had been taken towards meeting the demand for the *offensive* which should put everything right. The idea of crossing the Rhine and separating North and South Germany from each other was a thing of the past.

The same will always be the fate of projects of war when peace preparations have not been made correspondingly, and when intention and means of execution do not coexist.

Yet danger does not lie in neglect alone. Excessive demands, such as the rivalry between different great states in the acceleration of the mobilisation and concentration of their forces may produce, are quite as dangerous. The greatest strength fails when charged with impossible tasks, and men labouring under the feeling that such is the case lose coolness and clearness of head. Any one at the time of mobilisation not possessed of perfect vigour, both of mind and body, will not, in any case, be capable of responding to demands. Men in high command must, therefore, avoid all over-exertion quite as much as inactivity. Nothing, in critical moments, has a worse effect than nervous strain. Our simple forefathers knew nothing of what the excitement of our modern life has made a fashionable disease. Valuable as all time gained in mobilisation may be, yet it must not be bought at the expense of order.

As the concentration of the troops is intimately connected in one direction with mobilisation, so also is it intimately related to the intentions as to the *opening operations*. A form of concentration adapted to a projected offensive may be very unfavourable for the defence, as was experienced by France in August 1870. The original distribution of the troops is rarely final. The supposed intentions of the enemy naturally commence to make their influence felt at once. A

due consideration of these intentions enters into the plan of campaign.

The concentration of the armies of two Powers of the first order presents us to-day with the picture of the most stupendous migration of peoples. Each contains a million of men, and several hundred thousand horses, as though it were a small realm set in motion and wandering to the frontier in order to spread its whole population over a small district. But for our modern means of transit, it would be impossible to move and provide for such masses. It is only possible, because States like France and Germany have so much rolling stock at their disposal, as to be able to entrain their whole active army *simultaneously*.

One need not insist on the trouble and care necessary in the organisation of this migration of peoples and the movement of numerous railway trains going and returning. The preparatory labours for this special service absorb a considerable number of officers, officials and engineers in time of peace.

Where prevailing considerations are so numerous, it is difficult to find the correct solution. But, to compensate matters, the strategical concentration is also the one military operation which still remains under the absolute control of the supreme command. The conditions are complex and the difficulties are many, but they are not beyond the possibility of previous calculation, as most other events of war. For the success of the first act, in which uncertainty, otherwise the dominant factor, plays the least part, the general staff entrusted with the duty of working it out must be held principally responsible. Only afterwards does sovereign fate enter into the play, and sometimes direct the course of events contrary to even the keenest human calculation and foresight.

Twice within recent times this problem has been successfully solved. The massing of the Prussian army in the year 1866 is one of the finest examples of its kind. After it had been successfully accomplished, it appeared perfectly natural,

just as if it could not possibly have been otherwise; but let us present to our minds the original state of affairs, and we shall be compelled to admit that it was really an extraordinary feat. Three groups of hostile states threatened Prussia on the west, south-west, and south respectively—between them its own scattered territory, with the most unfavourable frontiers possible; a portion of its forces in Schleswig. Austria was five weeks ahead in its preparations for war, when Prussia mobilised its army, between May 5 and 12. Yet, on June 5, the latter was ready with its armies on the Saxon and the Sileso-Bohemian frontiers, and, on its part, gained fourteen days' start of Austria. That could only have been attained by the bold resolve to direct the whole of the available forces immediately against the most important enemy, viz. Austria; further, by the skilful use of all five railway lines converging upon the theatre of war; and, finally, by massing in three independent groups. This last was the very measure which was most severely criticised at the time; and yet it was the most important of all, since it was the principal means of rendering it possible to make up for lost time, as more roads must lead to three points of concentration than to one only. By virtue of this measure the provinces most directly threatened, the Mark and Silesia, were simultaneously protected, and the army could be provisioned without difficulty and disposed for its advance of a large number of convenient roads. An immediate advance was evidently bound to follow. To halt awaiting the enemy's attack, with divided armies on a line sixty miles in length, between the Saale and the Neisse, separated by the Elbe and numerous tributaries of the Oder, would have been ruination. Nothing but the junction of these armies in the enemy's country could neutralise the dangers of the position. But this also was in accordance with the original plan. The bold step was at once enjoined by prudence and precaution, and the good result obtained appears less as an accidental success, than as the fruit of wise combinations.

The short-sighted reproach launched by a critic against

that concentration and the initial operations in these words,* "The Prussian general staff did not, in respect of strategical combination, pass beyond mediocrity," has been aptly replied to by a writer most eminently qualified to pen a rejoinder. "Amid the perplexing elements of war, one will very seldom be able to attain the ideal, but even mediocrity may, as the result has shown, attain its object. The junction of the Prussian armies at the right moment has never been claimed, by the Prussian General Staff at all events, as a particularly brilliant idea or as a highly scientific combination. It was a remedy, rationally planned and energetically applied, for an unfavourable original situation imposed by necessity." *

In the year 1870, the most instructive part of the concentration of the German army was, in the first instance, the justifiable boldness with which, in spite of the suddenness of the French declaration of war, the scene was laid beyond the Rhine, and, secondly, the confidence which permitted of direct protection of Southern Germany on the Upper Rhine being dispensed with, in order to concentrate all available forces in the Palatinate. Nothing could be more correct; for the great German armies, which appeared on the Saar, threatened France and Paris so immediately, that the enemy could no longer entertain any idea of far-reaching operations.

Definite rules cannot be laid down for the concentration of troops, any more than for other operations of war. We can only in a general way examine the conditions upon which the first massing of the armies is dependent: All, or part only, of these conditions may be present, but their effect will differ in every instance. Their correct appreciation under given circumstances requires a military *coup d'œil*, though sound military training will also do much in this regard. If, therefore, the study of strategy be pursued with the single

* In the February (1867) number of the Austrian *Military Periodical* (Streffleur).

* No. 18 of the *Militär Wochenblatt* of 1867. Field-Marshal Moltke is the reputed author of the article in question.

object of gaining assurance that appropriate dispositions will be made at the opening of a campaign, this one benefit will be ample compensation.

4. *The Plan of Campaign.*

"*Je n'ai jamais eu un plan d'opération*," is a saying of Napoleon. But faith in a plan of campaign has nevertheless survived to our own days. Great soldiers, whose statues are erected by a grateful country, have a drawn sword placed in their hands, when they have gained glory as leaders of troops, while those who have been pre-eminently regarded as "thinkers," hold a scroll. This scroll symbolises their plan of operations, the sign of their special merit. It is said of them that they calculated beforehand and foretold the exact course events would take, and when and how they would defeat the enemy. Of Frederick the Great history narrated erroneously, for a whole century, that exactly on May 4 he intended to be before Prague, and to defeat the Austrians on the 6th. How widely spread, too, was not the assumption that the battles of Könnigrätz, Thionville, Metz, and Sedan were all in accordance with the plans of the German great general staff!

But now we are told by the work of the General Staff relating to 1870: "Only a layman can pretend to trace throughout the course of a campaign the prosecution of a rigid plan, arranged beforehand in all its details and adhered to to the last. The commander-in-chief most undoubtedly will, in spite of the changing fortunes of war, always keep the main object in view, but the means by which he hopes to attain it *can never be sketched out with certainty long beforehand.*"

That approaches Napoleon's saying, and we may even assume that practically his meaning coincided with ours. So far as the first course of action could be perceived with any degree of clearness, he also studied it and thoroughly prepared the way for success. Notwithstanding his audacity, he was a very cautious general, and his adverse judgment was

only passed upon the plans of the old school of military savants, which, in spite of their veneer of sagacity, were but the lucubrations of incapable *dilettanti*.

The plan which Charles William Ferdinand of Brunswick laid before the Council of Monarchs at Potsdam on November 3, 1805, is a fair example. Napoleon had taken Mack prisoner at Ulm, and was about to advance into the heart of defenceless Austria. The Duke demonstrated that the Emperor could not march by the Tyrol so long as the Austrians remained there, and that he would speedily be brought to a halt. The Prussians from the north and the Austrians advancing from the south by Füssen were then to fall upon his rear, and the Russians take him by the throat, as soon as he beat a hasty retreat, which was assumed a certainty. On the Neckar, the Duke would cut off his communications with France, so that he would only be able to save himself by crossing the Rhine, or might even be obliged to take refuge in Switzerland. In the winter, the Allies, after all these successes, would encamp victoriously on the Rhine from Wesel to the Lake of Constance, in order to keep Napoleon safely on the farther side. But, more than this, right through Holland, and across Italy, the Prussian *generalissimo* intended to have Napoleon attacked by the Allies. In this way a huge net, reaching from the North Sea to the Mediterranean, was to be drawn round the lion and he taken a prisoner in it. But how, supposing he freed himself by a battle?

The Duke easily helped himself over this objection. Napoleon was to lose the battle, it could not be otherwise.

Of course, speculating in this fashion, a plan of campaign can be elaborated in advance from the beginning to the end. Instead of the retreat of the French, however, the march on Vienna took place; instead of their defeat, the victory of Austerlitz; and the whole plan showed itself to be, what it really was, a worthless phantom.

With the commencement of the operations following the concentration of the troops, that dominant element in war,

uncertainty, begins its sway. In the reality of war, things always turn out differently to what was originally expected, and nothing is more natural. "The independent will of the opponent soon opposes one's own." Whoever would calculate the course of events beforehand, must base his calculations upon a known and an unknown quantity. Hence the result must be absolutely uncertain. An element of certainty does not arise till it has been decided which of the two parties is the stronger, when the stronger will know that he is able to carry out his own intentions wherever the enemy crosses them. His combinations then are on a firmer basis than those of his opponent.

Each of the belligerents will endeavour to create such a situation for himself, and so it comes to pass that, taking a simple conception of war, a great decisive battle will be sought by both parties. At all events, that will be the aim of the party which is determined, and inspired with confidence in self. *The first object upon which the movements of the armies are directed is, accordingly, the enemy's main army.*

Wherever this principle is departed from, the consequences will soon appear. The last instance of this is afforded by the summer campaign of 1877. The Russians, having once crossed the Danube, very quickly reached the passes of the Balkans, and pressed forward through this protecting range of hills. It appeared that the road to Constantinople lay open, and that in two weeks would be gained what had been expected to take months. But the realisation of this success was still subject to grave misgiving. The Turkish armies on the north side of the Balkans were as yet undefeated, and the fate of the campaign depended upon the successful execution of the task left unaccomplished there, not upon the mere gaining of a few passes. Scarcely did the armies of the Osmanlis give the first signs of life and appear on the Lom and at Plevna, on the flanks of the Russian advance, when all previously gained had to be renounced, in order to pursue the hitherto neglected decision in open battle.

Until this decision occurred, all forward movement was arrested.

In the battle, the victor subordinates the will of the enemy to his own, but does not entirely suppress it. Absolutely decisive battles, like that of Sedan, in which whole armies disappear from the theatre of war at a single blow, are very rare. The will of the defeated will still assert itself somewhat. MacMahon's influence, notwithstanding his defeat at Wörth and the defective condition of his army after its reinforcement at Châlons, was yet sufficient to divert the German main army from its march upon Paris to the northern frontier.

Even a successful battle does not ensure the full execution of plans. After the battle this also depends upon the circumstances of the moment, and upon the complications resulting from effect and counter-effect. These lead to fresh actions, and each battle changes the situation as completely as a twist does the coloured glass of a kaleidoscope. Thus the general is compelled every day, and often within a period of a few hours, to modify his plans to suit fresh situations. Military history rarely gives prominence to this feature. Owing to the abundance of events, it is generally occupied with the occurrences which command general interest after the event, and dismisses with a passing reference occurrences of momentary importance, which thus fall into oblivion. After a war one ought not only to write the history of what has taken place, but also the history of what was intended; the narrative would then be instructive. The web of determining influences is much denser than is generally imagined. A day about which we only read a few lines in a book may, in reality, have been fraught with great historical interest.

Many things must be kept in view. At one point activity must be stimulated, at another undue impetuosity requires bridling, in order that none may swerve from the straight course towards the object glimmering in the distance. Fresh situations demand new plans, and it depends upon the tenacity and the penetration of the general to what extent a

great leading idea shall, like the proverbial red thread, pervade all his plans. Where shall we find this idea? It proceeds from the general military and political situation, the consideration of which will, as a rule, lead to a definite conclusion as to what must be attained in order to deprive the opponent of every desire for continuing the struggle.

The weaker of the two opponents will say to himself that, by continuing resistance to a certain point, he may either tire out the other, or gain allies. The stronger ponders as to how far he must advance after crushing the enemy's forces; whether he should occupy the enemy's capital, some important provinces, or the whole country, in order to ensure the conclusion of a favourable peace, which is the final object of every war.

One may thus construct a mental outline of the course of events, always bearing in mind the essential aim, unaffected by the ever-changing aspects of the moment. In principle it may perhaps be assumed that it will become necessary to stand on the defensive at a given point or points, awaiting the arrival of reinforcements, or pending a junction with the forces of an allied power. It may be proposed, providing sufficient means be available, to push the enemy, after defeating him, in a direction disadvantageous to him, on to ground selected beforehand. The most able strategist cannot, however, do more than supply general indications; in regard to details, none but the initial steps can be definitely determined.

No plan of operations can with any safety include more than the first collision with the enemy's main force.

Unfortunately, the strategic plans of the generals commanding-in-chief only seldom transpire in their entirety. As a rule, concomitant political considerations prohibit publication. Of all the greater value are isolated instances, where they have been printed, such as the Memoir of the Prussian General Staff,* which subsequently formed the basis for the

* "Project," written in the winter of 1888–89; see German "Official Account of the War of 1870–71," vol. i. part i. p. 50.

first movements of the German armies in the great war. We there find, after a general survey of the position of Germany and France, and a comparison of their respective forces, the advance of the three armies described almost exactly as it actually took place. Even every detail within the province of the commander-in-chief is given. Further, the immediate object was declared to be to find and attack the French main army, which, in any case, might be assumed to be close to the German frontier. The lines of advance, as adopted in the memorable days of August, were thus easily determined. Beyond this, we are told, only the one leading idea is discernible, namely, to force the hostile armies in a northerly direction away from their communications with Paris. At the moment it certainly was not possible to do more than indicate the object which it was most strongly desired to realise.

The idea thus generally outlined was reasonably sure of realisation, though a prophetic calculation of every single movement ensuing was out of question. In the advance of two German army corps upon the Moselle, southwards from Metz, towards which latter place Bazaine had withdrawn, in the movement of the third army upon Châlons, in the march upon Sedan—everywhere the endeavour can be perceived to drive back the enemy into the smaller northern part of France, and to cut him off at the same time from his metropolis and the resources of the south. But even the gift of prophecy would not have enabled us to foretell that Bazaine would decide to remain about Metz, and that MacMahon would thereupon be obliged to undertake the disastrous march to his relief. Such decisions are dependent upon the doubts swaying the mind of the general at the critical moment. A mere accident, information not important in itself, an encouraging or dispiriting word, may modify his calculations and plans.

Only strategic plans of such wise limitation as those referred to have prospects of realisation. Hence the term "project of operations" is more appropriate than "plan of operations" or "plan of campaign."

The total province safely embraced within the project of operations is narrowly bounded. It now includes scarcely more than the first assembly of the forces for the advance against the enemy's main force, or for repelling its attack. In the future it will be still further restricted, according as armies become more numerous, and systematic frontier defences grow in extent. From the first moment armies will confront each other closely, and the scope for movements will become very small. Under the circumstances a preliminary operation formerly unknown, that of forcing the frontier lines, will in future have to be executed. This must be attempted by the assailant in the place where he knows that the enemy's main force is not in immediate proximity, since its presence would materially impede the capture of the defences. In this case, accordingly, the enemy's main body will be sought out by a détour. Movements to the flanks of the original line of advance on the part of both belligerents, and the rapid massing of troops at the point where the forcing of the frontier line is hoped by one and feared by the other, will be the prelude to the ensuing bloody battles, the issue of which will decide the nature of further operations.

It is difficult to specify detailed particulars as to the contents of a project of operations. It will differ totally according to the situation of either belligerent at the opening of hostilities, and it is only possible to trace its genesis, which will, as a rule, be fairly uniform.

Projects of operations and the details of concentration must be worked out together. First of all, the general political situation would be considered in its main bearing, generally combined with an estimate of the forces at the disposal of the belligerent parties. The result of these initial deliberations will be a decision as to the power against which the main forces shall operate, so as to bring about a decision, of real political effect, and as to Powers with which it is intended to temporise or merely to keep them under observation. The simple case of only one Power having to be considered is

rare. In most cases allies, doubtful neighbours, or secret as well as declared enemies, demand attention. Germany, especially, owing to its central position between great Powers, must ever look to every side.

Let us, for instance, complement the 1868 project of operations by the supposition that Austria had demanded attention as an ally of France. As at that time only two years had elapsed since the Austro-Prussian War, such a supposition does not lack the requisite element of possibility, and makes the example more instructive. In that case the first consideration would have been, whether the main army of the North-German Confederation should be employed against France or against Austria.

On the French frontier, the Rhine, with its fortifications, formed a very strong line of defence, which might have been held for a long time even against superior numbers, whereas on the Austrian frontier such a line of defence was wanting. But in a weak defensive against France, South Germany would have remained without protection. The French could have evaded the North-German Rhine front by marching *via* Worms, Mannheim, or Speyer, and have advanced on Berlin by the great road through Franconia which Napoleon used in 1806. Meanwhile the offensive of our main forces against Austria would have come to a standstlll, perhaps before Olmütz, or on the Danube. It would have been equally possible that the Austrian armies would have immediately retired in that direction in order to give the French time to score successes. Besides, at that time, the Austrians required several weeks to become ready for war. On the other hand, it might have been said that the French, once German troops were on their soil, would not have waited for Austria, since their national pride would not have suffered that. Here, then, was a case for quickly dealing a decisive blow, the effect of which might alter the whole situation, and possibly induce Austria to sheath her half-drawn sword. Austria might, moreover, have been restrained by the fear of Russia. Therefore, in the given

case, it would probably have been decided, in the first instance, to put only a weak army in the field against Austria, and to launch the main force against France, with a view to fighting a great battle with superior numbers at the earliest possible moment.

In the event of other political groupings we shall similarly have to study the question as to where the main army and where minor forces should be employed, or whether, as in 1870, it be advisable to operate with the whole force against a single enemy.

Such questions being decided, we pass to the details of the strategical concentration. As this process must, if possible, be completed earlier, but, at any rate, simultaneously with the enemy, it will simply be necessary to distribute the troops over all the railways leading to the frontier, in such a manner as to avoid every détour and all loss of time. The last stations within the radius of secure occupation mark approximately the line of development of the concentration. Next come the manifold considerations of a political and geographical nature, already explained, in addition to which general economical conditions must also be regarded. We must take into consideration whether the general situation compels us to await the attack of the enemy, or whether, which is always desirable, we should take the initiative. As in the latter alternative the object in view is the enemy's main force, it follows that its probable concentration will be of the utmost influence upon our own. Here we are somewhat in the dark, but if we transfer ourselves in spirit to the side of the enemy and there enter into the same investigations as already made in regard to ourselves; if we study carefully the position of the railways in the enemy's country; consider his necessity of covering his threatened provinces and, later, his capital; and if we examine the nature of his existing frontier defences, the probable course of his concentration can be divined with tolerable exactness. We shall never be far amiss if we keep our eyes on the larger railway centres near the frontier, since here also, as in our

own case, they prescribe the section of country in which the concentration must take place. Extraneous movements dictated by secondary considerations can never assume great importance, when it is considered that the same lines which convey the several parts of the army must also carry all impedimenta, besides keeping up a constant supply of fresh men, horses, food, ammunition, clothing, and material of all kinds, thus being permanently absorbed in the service of the same contingents. By such considerations the solution of the problem becomes greatly simplified; and, putting things in the worst light, there remains but a very limited range of possible contingencies.

If we have made up our minds as to the enemy's concentration, *the project of operations* (supposing there be still scope for choice) will readily fix on the part of the frontier where our own troops ought to be massed, and upon which the railway transports in the last stage will be directed, branch and local lines being made use of. The final disposition of the troops will be effected by marching. Care must be taken to allot sufficient room to each corps to ensure reasonable comfort. It must also be taken into consideration that, in case of intended defensive, it must be possible to combine the troops for battle in a good position, whereas in the case of an intended offensive each army corps must have at least one good road leading from its quarters straight to the enemy. The cavalry divisions must always be placed in the van, otherwise they would have to be brought up through the other troops to enable them to begin their reconnoitring duties. This would not only tend to produce confusion, but would also deprive the cavalry of quarters for the period of their passage through, all the villages and towns being already fully occupied. They will, as a rule, be the first to entrain, or, at all events, a part of them, by which arrangement they will naturally be placed in the lead.

The position of the railway termini, and of the roads upon which the last short marches are made into the area of

concentration, usually determine the natural grouping of the assembled forces in several armies. It was thus in 1870. At all events, no unnecessary movements involving loss of time will be undertaken merely in order to make one particular army stronger than another, or to assign particular corps to a given group.

The measures so far dealt with form the basis on which to elaborate the schedule of transport by rail for purposes of concentration, though its practical working will suggest many subsequent amendments to the project of operations.

Once the transport arrangements in connection with the concentration have been definitely fixed, the project of operations can be advanced another stage by defining the steps immediately succeeding the completion of the assembly of troops, since it will then be possible to estimate the number of troops available on the frontier on any given date. The same may be calculated with regard to the enemy, and conclusions may be drawn as to what the latter might undertake and what counter-measures are called for. It will further be seen at what moment one has acquired sufficient strength to be secure against surprise, when the numbers available are sufficient to warrant an advance and the opening of active operations. In conclusion the general direction of the proposed forward movement will be indicated.

By working with painstaking care, it will often be possible, even during the progress of concentration, to single out certain moments when circumstances are in one's favour, and when numerical superiority is established at certain points, whereby it becomes possible to disturb the opponent's concentration by bold ventures, which, therefore, may be initiated before the opening of general operations.

Special considerations are called for where conditions at sea or the question of coast defence are likely to be of moment, that is, if we have to reckon with naval operations and the possibility of hostile landings. Though generally factors of secondary importance, these may, by the force of

circumstances, exercise a most decided influence. It suffices to quote the example of the Ottoman Empire in support of this view. Its capital, which contains all the great military institutions, the depôts of arms, ammunition, and *matériel* of every kind, thus being the most important place of arms, as well as the principal naval port of the empire, is situated on a strait accessible from two seas and navigable by vessels of deep draught. In addition, the government of the country is purely autocratic, the idiosyncrasies of the ruler holding absolute sway over the attitude and the destinies of the country. Hence a transfer of the seat of government at the moment of threatening danger would be inopportune by reasons of domestic policy, and a lucky stroke from seaward might decide the fortune of war at the very beginning. Though fairly protected on the Mediterranean side by the fortifications of the Dardanelles, Constantinople is very vulnerable at the side of the Black Sea, although its coast is no farther than 22 km. in a straight line from the city. While formerly the Turkish fleet in these waters was superior to that of Russia, in recent times the ratio has been reversed. Surprise landings of Russian troops at the gates of the capital are therefore quite possible on the unexpected outbreak of war, and would be of greater import than the appearance of a British fleet under Lord Duckworth under the walls of Stamboul.* Such enterprises would probably be fateful for the country and neutralise all other preparations for war. This, then, is an instance in which regard to the possibility of hostile naval operations would be of prime importance in any project of strategical concentration and disposition of troops, and in which a considerable force would have to be held in readiness solely for the security of the capital.

In the case of a project of operations for an offensive campaign, the points at which it is proposed to force the enemy's frontier defences should be approximately indicated.

Even where it is hoped to obtain the surrender of certain

* February 20, 1807.

works simply by bombardment, success by means of field artillery alone can never be expected with any degree of certainty. Heavy artillery is required for this purpose, and its disposition demands due consideration in the plans of concentration, since its subsequent movement would be very difficult at a time when all the roads within the area of operations will be crowded.

For similar reasons it should be decided beforehand what fortress, if any, within the enemy's territory is to be besieged. No State can operate simultaneously against several modern fortresses of first rank with reasonable prospect of success, the requsite amount of *matériel* being so enormous, and the loss of time entailed by its transfer from one locality to another being likely in most cases to jeopardise the much desired result.*

The complete text of the project of operations will not, usually, be submitted in writing to the *staffs* of the different armies: it is, however, of importance that the commander-in-chief of an army, or his chief of staff, should be informed of the general scope of its contents, in order that they may not grope in the dark during the preliminary operations, which are frequently of decisive influence upon the whole war. Even in 1870, we are told by the work of the general staff, there was no lack of misunderstandings at the first advance on and across the Saar.

It would, perhaps, be wise to assign a share to those selected in time of peace for the positions of chief of staff to the several armies in the task of elaborating a project of operations, if not in working out a definite plan of campaign.

Since the first letters of guidance from the general headquarters are founded on the project of operations, their correct interpretation would be greatly facilitated by a knowledge of the basis of the project.

* The project of operations must be supplemented by the addition of railway and route tables, a summary of the composition of the mobilised armies, a list of the officers in command, and information relating to the enemy, a sufficient number of copies of such details being easily produced by a multiplying process.

It is not difficult to perceive that the project of operations cannot be the work of a day; that it is evolved gradually, or, if originally cast in a rigid mould, that it must eventually be amended and complemented. Though one be still on safer ground than in the decisions necessitated during the succeeding phases of war, yet even here we are very much tied down. The leading strategical idea depends so much on the mobilisation and the concentration by rail, as to be deprived of much of its former freedom in directing the flow of troops. If thereby the danger of creating vain conceptions is minimised, on the other hand the work generally is made infinitely more difficult. Greater freedom will not be gained till further projects of operations are called for in the course of the war by any fresh phases due to the occurrence of decisive events. The concentration is now completed, the armies are in motion, and there only remain the general considerations which rule now the same as in former times.

One certain principle merits final notice.

Even though the project of operations takes cognisance, as a rule, of several possible contingencies, yet it must never be essayed to design measures to meet all cases, for such would generally be of a nature to prove effectual in no single case.

On September 25, 1806, the Prussian armies stood in three groups at Mühlhausen, Naumberg, and Freiberg in Saxony, whilst the French in South Germany were widely dispersed in cantonments. The Duke of Brunswick now devised the plan of surprising the French army and of defeating it in detail before it had time to concentrate. But this resolution, naturally so virile, was speedily shaken by wavering thought. Diplomacy considered a peaceable compromise still possible; hostilities were accordingly not to begin before a certain day. Meanwhile Napoleon might have anticipated the Prussian plans, turned the advancing columns on the right or left, hurled them into Bohemia, or severed them from the Elbe. It was therefore considered advisable to place the army in such a position that, if necessary, it could promptly fall back upon the defensive. It was, moreover, deemed wise to select

a position in which the army could face to the right or left with equal facility, according to the direction of the enemy's approach. In the result it was decided not to concentrate the forces on the north side of the Thuringian forest. By this means the wished-for delay in the opening of hostilities was gained. The troops, it was thought, would be able to halt before reaching the mountains, in case Napoleon were already approaching; they could march equally well from Erfurt and Gotha by Eisenbach and Fulda, if the Emperor utilised the Hessian, or by Hof, in case he chose the Frankish-Saxonian military road, and if he hesitated, there remained the possibility of crossing the mountains and of surprising him.

As a matter of fact, the design suited all cases equally well, but herein lay its weakness; for the measures proposed were not sufficiently vigorous and were not so fully adapted to any given hypothesis as to promise certain success. The only favourable moment was thus allowed to pass.

After weighing all possibilities, the most probable must be finally adopted, one's own plans made up accordingly, and steps taken to ensure their energetic execution. In the instance quoted, the great leading idea was: a surprising offensive in Southern Germany. Loss of time had a stultifying tendency, and should accordingly have been avoided under all circumstances. The project of operation could only aim at the rapid junction of forces forward in the direction of Bamberg, all direct roads being fully utilised. Caution could only be displayed by rapidity, by proper vigilance, and by the choice of the place of concentration, so that, though the several columns might come into collision with parts, they yet should not meet the whole of the hostile forces.

Dangers, doubts, and matters of secondary importance must not be disregarded, yet should only meet with consideration in so far as not to prejudice the measures taken to realise one's own designs. Herein lies the true sense of the maxim, so often quoted, so seldom rightly under-

stood: "Erst wägen, dann wagen" (First weigh, then venture).

As in all great decisions in war, so in the formation of the project of operations, a certain amount of bias is of paramount necessity. Whoever cannot descend to that will never, in the presence of a large number of equally plausible views, succeed in grasping one single great purpose; he may, perchance, prove himself to be a subtle reasoner, but never a great general.

5. *Intelligence and Reconnaissance.*

Intelligence of the enemy is, as Clausewitz says, the basis of all ideas and actions in war. Hence it merits a prominent place in these reflections. There is no more rational guide in forming one's own decisions than the probable action of the enemy. But it is by no means permissible to subordinate one's own intentions to the action of the enemy, for he who approaches his task with a faint heart confines himself to the defensive. The more robust mind aims at imposing his will upon the enemy by energetic action and by striking the enemy in his most vulnerable spot. In order to be able to do even this, it is essential to ascertain his intentions. Good intelligence confers great superiority. "If we always knew the enemy's intentions beforehand, we should always, even with inferior forces, be superior to him." *

Nowadays we bring a fair knowledge of the enemy with us into the field, as his military organisation is carefully studied in times of peace, this being a material part of the work of the general staff. A correct estimate of the qualities of the enemy before the campaign forms the requisite basis of the whole service of intelligence. As to the first assembly of the enemy's forces, one will not, as has been seen, be in complete uncertainty. Even during the time that the first transports of troops take place, the enemy's country is not entirely closed, communications thence still being possible. After the commencement of operations, however, things assume a

* Frederick the Great, General-Principia vom Kriege, 1753.

different aspect, and the original picture soon becomes distorted and obscured. From that moment it becomes a question of kindling fresh light from day to day. Among the means available to this end, those which the armies possess in their own energy are far preferable to all others. The ill repute of espionage is undeserved, and its utility in modern warfare is restricted to a few cases. When, in 1870, it was observed in France that the German commanders evidently acted upon good information, loud cries of indignation were raised against Prussian espionage, which, as alleged, was traceable in every direction. This indignation only proved that the *Grande Nation* of those days had not a very clear conception of the affairs of war.

In reality, the cavalry is the eye of the army. The unceasing activity of this arm is the best means of ascertaining with clearness the dispositions and intentions of the enemy. Its mobility enables it, so to say, to anticipate events. It discovers to-day what awaits the army to-morrow, or even on a later day. Its functions are to find the enemy's columns on the march, his camps, and his outposts, and to keep them constantly under observation. It must encircle the enemy like an elastic band, retire before him when he advances in force, but cling to him and follow him when he retires. The intelligence that it brings has the advantage of being first-hand, and of applying to what is of importance at the moment. It has this great advantage over the reports of spies, that all the intelligence comes from professional persons competent to judge. These duties demand a keen intellect and a thorough knowledge of war; but the cavalry officer of the present day is specially trained for them.

This gives occasion for some reflections on reconnaissance duties in general. Text-books say much of individual well-mounted officers, accompanied by a handful of daring riders, breaking though the enemy's outposts, passing round the flanks, and making their observations right in the front or in the rear of the enemy's main army. An example of this kind is related by Heros von Borcke in a very interesting

manner.* Such performances are always most creditable, but they are difficult, as the enemy will use his cavalry in the same way. They require an extraordinary amount of courage, exceptional sagacity, and equally exceptional good luck. Therefore, we must not build our calculations entirely upon them,† much as all good cavalry will endeavour to distinguish itself in that way. It is also of vital importance to have touch of the enemy at a considerable number of points, since any one piece of intelligence will rarely give adequate information. The great dimensions of modern armies, to which we must constantly call attention, prevent that. Yet reports from twenty or thirty different places give us the required range of view.

It is quite as difficult to compile reports as it is to draft orders. Clearness is the chief requisite. It is impossible to lay down rules as to what must be reported and how to report it. In regard to great operations of war it is, with few exceptions, only reports from officers that have to be considered. All the more reason that one should be able to rely upon the judgment of one's informants. Only certain incidents are of such an important character as to necessitate an immediate report. Whenever the enemy is first seen; when his infantry and artillery follow close upon his cavalry which alone had been at first under observation; when positions, which were believed to be occupied, are found to be unoccupied, important passages open, rivers of importance unguarded; when a particular change is observable in the

* General Stuart, the commander of the Virginian cavalry, accompanied only by von Borcke, rode through the Union outposts in the night of June 8–9, 1862, reconnoitred the ground within the hostile lines, and placed himself in personal communication with one of his spies. The latter gave him the required information as to the enemy, which enabled him to begin one of his finest raids on June 12, by passing round the flanks of MacClellan's army (H. v. B., "Zevei Jahre im Sattel und am Feinde." 2te Auflage. Berlin, 1886. Page 27).

† In the campaign of 1870–71 there were many very successful reconnaissances by individual cavalry officers to record; but we must not forget that the enemy's cavalry obstructed their operations very little. In the future that may be different.

enemy's direction of march, and when a distant sound of guns announces a conflict, intelligence is always sent back in order to rapidly acquaint the commanders of the columns in rear. It is often quite as important for the commander-in-chief to know that his cavalry have nothing to report, that they cannot discover the enemy in any given direction, as that the latter has been met with in another locality. The assurance of the general is materially enhanced by the negative supplementing the positive. This fact alone shows the importance of frequent reports, even though there be no special news to give.

Hearing and hearsay will, of course, in the case of the cavalry also, amplify to a great extent what has been seen.

Careful examination of the inhabitants is most important. Facility of communication has in these modern days vastly increased the general interest and the public curiosity. Reports of great military movements always spread. It is often quite enigmatical how quickly, in spite of interruptions to the ordinary means of communication in war, vague intelligence flies which has a substratum of truth. The country population in the neighbourhood of Metz had news of the march of MacMahon to Bazaine's relief, at a time when that movement was as yet in embryo, and none of the great battles preceding Sedan had occurred. Of course, a great difference will be observed between various nationalities. It is certainly much harder to obtain anything from the stolid Russian and the reserved Englishman than from the animated Frenchman and Italian. But something can always be learnt; and it is by no means necessary that the roaming patrols should succeed in meeting traitors to give important information. Any person interrogated will, merely in order to put an end to the annoying cross-questioning, say what appears to him quite unimportant.

But from a hundred unimportant things one important item may be collated.

From the absence of news from any district it is, moreover, permissible to draw the inference that military movements

are actually not in progress. This conclusion must not be dismissed, since it increases assurance to a considerable extent. It is not correct to imagine enemies everywhere. We may rely upon it that wherever they are, they will soon make their presence known in some way.

The person reporting must strictly exclude all personal conclusions from his reports. The sole requisite is to announce all that has been seen, and exactly as it happened. It is within the province of the higher commanders, who are in a position to trace the connection between single phenomena and the situation as a whole, to assess the value of each item of information.

Very frequently a suggestion embodied in an officer's report has been the cause of operations which, though appearing advantageous from his point of view, yet ran counter to the interests of the army in general.

When, in 1806, the Duke of Brunswick wished to undertake the carefully-planned march through the Thuringian forest, he sent Captain Müffling ahead across the mountains to reconnoitre. The captain found the French already in motion towards Saxony, and the country which lies on the Frankish Saale, where they were supposed to be in force, evacuated. That appeared to him to be contrary to all "sound sense," as Napoleon had left his communication, towards the rear in the direction of the Rhine without protection. Müffling advised the Duke to operate against these communications, depicting in glowing terms the opportunity for an excellent stroke. He made the sensible proposal only to employ cavalry for this purpose. But the more cautious Duke, not wishing to allow the inviting opportunity to escape him, yet not desirous of hazarding the safety of his troops, decided to send infantry and artillery with the cavalry. And so it came to pass that, during the decisive double battle of October 14, the Prussian army, which, apart from this, was much inferior in force to the enemy, had further weakened itself by the despatch of 11,000 men in a perfectly futile expedition against the

French lines of communication. It was Müffling who, by these gratuitous additions to his report, aided in causing this mistake, one of the worst committed by the Prussian commanders in those disastrous days.

Every report must also plainly distinguish between what has been actually seen, and what is derived from an outside source. After it has been committed to writing, the art of the reporter will consist in putting himself into the place of the recipient, so as to see if everything would be intelligible to him.

Valuable additions to its intelligence can be given by the cavalry by capturing papers. It is first to enter places in the enemy's country hitherto not visited, finds letters in the post office, telegrams at the telegraph office,* newspapers in the possession of private persons or in the hotels and restaurants; and all these are valuable means of acquiring intelligence. The cavalry must display a talent for finding such sources of information. Even the most insignificant thing must not escape it, provided it be worth noticing at all. Moreover, it is not difficult for enterprising commanders to put life into this particular branch of duty, as every man takes a certain pride in making discoveries, which trait only requires stimulating.

In order to see much, the cavalry must spread widely, and if able to extend beyond the enemy's wings, a considerable advantage is gained, since it will thus, at the same time, more effectually screen the movements of its own army. But, on the other hand, the veil must not be too thin, lest the enemy break through it. Closed bodies of cavalry must follow the patrols, in order to prevent this.

The enemy will think and act in the same way, the natural consequence being that the cavalry divisions in front of the armies speedily come into collision. Thus, where the space between the armies and the nature of the ground do not

* As is well known, during the campaign on the Loire, the register of messages found in a French telegraph office gave much information to the staff of the Second Army.

preclude it, a series of cavalry skirmishes will be the prelude to the general operations. Only the side that succeeds in previously defeating the enemy's cavalry can achieve great success in securing intelligence, as otherwise individual officers and small patrols would not be able to penetrate to the enemy. As a matter of fact, none but a superior force of cavalry will avail,* for the weaker will surely be very soon driven back upon the marching columns of the army corps, and would become a burden rather than a help, being unable either to screen the movements of its own corps or to observe those of the enemy. This condition must be taken into account in the much-discussed question as to how much cavalry we ought to have. Like many other things in the military organisation of modern civilised States, the number of cavalry depends upon the relative position in this regard of the Powers likely to be arrayed against each other.

Much has been said in recent times of distant raids of large masses of cavalry in the flank and rear of the enemy, quite beyond the scope of reconnaissances, and having for their aim the destruction of railways, telegraphs, bridges, magazines and depôts. The American War of Secession made us familiar with many such raids, by which such men as Stuart, Ashby, Morgan and others, attained great renown. But before attempting to introduce them in our possible theatres of war, we must first take into consideration the different natural features, the economical conditions, and the area of most European countries, but more especially those of the West, not to mention the radical difference in military organisation. If a body of horsemen, under a partisan leader, was defeated in such an enterprise, or if, when surrounded by the enemy, it dissolved, that event was of little consequence, if only they had first justified their existence by a few successes. Quite a different impression would be caused by the annihilation of one of our cavalry regiments, by history and tradition closely bound up with

* Superiority must, of course, be sought, not merely in numbers, but in a happy combination of efficiency and numbers.

the whole army, and, when once destroyed, not so easily replaced as a volunteer band of adventurous farmers' sons.

The systematic organisation of the defensive power of civilised nations is also opposed to raids. Even when the armies have already marched to the front, incursions of horsemen into our densely populated countries can, with some little preparation, easily be checked by armed citizens. The French Franctireurs in the western departments faced our cavalry, whenever they met isolated detachments; and what is more probable than that well ordered levies, such as our "Landsturm," organised in time of peace, would render much more effective service of this kind? If favoured by the features of the ground, they would have nothing to fear from cavalry. The frequently expressed misgivings as to the flooding of frontier districts with swarms of hostile horsemen in the very first moments of war, in order to derange our mobilisation and to lay waste the country, are greatly overdone. Imagination may be fired and the heartbeat of enterprising guerilla leaders may be accelerated, but the success of such ventures remains always problematical. Bodies of cavalry counting many thousands may, certainly, become a real danger, though on account of their very numbers they would encounter many obstacles to rapid movement. If then detachments of Landsturm-men, which are readily assembled in thickly populated districts, appear on the scene, well armed, well led by capable officers, and posted within its own home district, and if they will only act with a fair show of confidence, the danger of "flooding" will soon be dispelled. The threatening flood is partially stemmed by the necessity of regular feeding of the large number of horses, which for reasons of security dare not be scattered, and experience will show that the volume of the stream which, so to say, succeeds in piercing the dam, is out of all proportion below the actual number of horsemen who crossed the frontier. The only exception which we can admit is that of sparsely populated, but naturally rich, sections of country, which yield ample supplies, such, for

instance, as existed in North America at the period of the War of Secession.

In such enterprises on our theatres of war small boldly-led detachments will obtain quicker results by stratagem and rapidity than will great masses by force. We can only imitate the spirit of daring and enterprise displayed by the American horsemen; the method of execution must, upon European soil, be totally different.

Our cavalry, for the most part, carries a good firearm. In 1870, too, it was not without one, for it promptly took up the chassepot rifle whenever needed. Now, however, it is being properly trained in the use of the rifle and for dismounted action, and has thus gained in independence.

It can not only defend itself better against surprises, more easily hold in check and more readily deceive,* the enemy than formerly, but is, above all, more capable of vigorous offensive action. If too much is not expected of its fighting powers on foot (because our imposing squadron, when dismounted, is at best only the equivalent of a handful of infantry), and if the cavalry also does not forget that its proper place is in the saddle, the reconnoitring and screening duties will be the gainer. This advantage, let us hope, will counterbalance the increased difficulties created during the last decade.

The saying of Frederick the Great, "*In war a good cavalry confers the mastery*," has lost its importance, in so far as the *rôle* of cavalry in battle tends to dwindle. *But at the moment an efficient and numerous cavalry force is still the best means of dominating movement.* As in certain games the player who has the first move has the advantage, so in war a like advantage will accrue to him whose cavalry shows itself superior, and who, consequently, more quickly appreciates the situation, perfects his plans more promptly, and opens the operations.

But it is not sufficient to have good cavalry, it must also be well handled by the superior authorities. These latter

* That is, make the enemy believe in the presence of infantry.

are really responsible for many mistakes unfairly laid at the door of the cavalry. Cavalry divisions must be allowed a proper measure of liberty of action, without slipping entirely out of the hands of the commander-in-chief. Whilst the masses of cavalry formerly were kept back, to be employed as reserves or in the pursuit of the beaten enemy, the tendency now exists to send them forward at once, on the first day, to a great distance in a certain direction. This, again, may produce the inconvenience of cavalry being wanting one day when most urgently required. The despatch of the squadrons to the front and the choice of the direction in which they are to proceed must also be in accordance with a definite plan. Moreover, the commander-in-chief must not only be clear as to his real intentions, but must also communicate them with perfect clearness to the cavalry.

Success in reconnaissance depends greatly upon the character of the orders given. The hackneyed phrase that the cavalry is to advance to discover the strength and position of the enemy, is perfectly useless; for this merely implies the natural duty of the arm. If, as often happens, it is instructed to discover the intentions of the enemy, the commander really demands that it should perform the task which is really incumbent upon himself. Both cases betray a certain perplexity in the mind of the commander, and this will result in a halting kind of action. It is wisest to put to the cavalry simply the questions which it is most desirable for the commander-in-chief at the moment to have answered; viz., whether hostile encampments are met with in given localities, whether given towns are occupied, whether the enemy's advanced guard or his main army have reached a given line, how far the flanks of the enemy extend, whether on a given railway or road troops are being transported or are on the march, &c. Such commissions, which cannot be misunderstood, will bring in clear reports, from which the commander-in-chief can draw his own picture of the strength and position of the enemy, and divine his intentions.

Cavalry has now to meet a competitor in the field of recon-

naissance in the cyclist. Indeed, during peace manœuvres the first authentic information of the opponent is frequently brought in by the wheelman who had rapidly sped forward. In the later phases, when obliged to evade approaching hostile patrols, the cyclists are again surpassed by the cavalry following in their tracks. The strength of the cyclists lies in the facility with which they cover great distances, from 100 to 150 kilometres, occasionally even more ; their weak point is dependence on roads and climatic conditions. The proper field for cyclists' reconnaissance is on ground beyond the power of cavalry to search out, owing to the necessity of avoiding either undue dispersion or excessive deviation from the main direction. Détours need not deter cyclists where it is a question of passing round the enemy's flanks, or even of gaining his rear, for purposes of observation ; and they are tied, even less than cavalry, to the natural lines of retirement and communication. If employed by the superior authorities freely and independently, they will certainly be able to render most excellent services. The one thing to be avoided is to shackle them to the marching columns, because nothing is so irksome as slow riding or the leading of machines. Their employment in the conveyance of information and orders has already been discussed.*

Cyclist sections of some strength can become excellent auxiliaries to reconnoitring cavalry, as they are able to reach important passages, bridges, mountain, forest and bottom defiles, localities not readily passed round, &c., more rapidly than the cavalry and irrespective of distance. They can also hold such points temporarily after the passage of cavalry and overtake the latter after the lapse of some time. Surprises and sudden attacks, likewise, will naturally come within their province in a country well provided with roads.† If the value of cyclists has so far not been appreciated so highly as

* Vide p. 99.

† Cyclist pioneer detachments may also advantageously be attached to cavalry divisionz and corps, particularly for the execution of demolitions, destruction of railways, &c.

will be the case in future, the cause must be sought in the still existing want of a sufficient number of uniformly trained riders.*

The captive balloon can be usefully employed in clear weather and still air for purposes of observation on the battlefield. It affords a range of view over ground hidden to all other observers. The approach of hostile troops will certainly be discovered more readily and timely in bird's-eye view than from the level of the ground, though the difficulties of communication with the earth have not yet been completely surmounted.

In and round fortresses, where quiet and steady observation is possible, the employment of the balloon will probably be more profitable.

The method pursued in time of peace of rapidly conveying information simultaneously to all parts of an army by means of balloon signals meets with the objection in war that the enemy would soon discover the signalling code; but the system is nevertheless worthy of attention on occasions of special importance.

An important means of acquiring intelligence is found in skirmishes and battles. Both sides come into prolonged contact and learn to know each other. Frequently the sole object of fighting is to obtain information, though this practice is very seldom justifiable. The advantage is, of course, pre-eminently on the side of the victor, because he remains master of the field, upon which he may find ample material for supplementing his knowledge of the enemy. The uniforms of dead or wounded soldiers inform him what divisions he has before him; reports, note-books, papers of all sorts are found on the corpses, and sometimes even a vehicle containing official records is captured. In short, an action generally yields full information regarding the parts of the enemy's army immediately concerned.

* France took the lead in the formation of small cyclist companies, which will probably be employed, but on a somewhat larger scale, like the infantry detachments formerly carried on wagons.

In some cases this information goes further. A letter of recommendation from Gambetta, which the Irish adventurer, Captain Ogilvy, who was shot on November 27, 1870, carried on his person, gave the staff of the Second German Army a very valuable intimation of the next intentions of the Government of National Defence, which at that time, as is well known, planned an advance upon Fontainebleau for the relief of Paris. Of course, for such flights of fortune a fight gives greater scope than marches and strategical operations.

But frequently the result of the fight is, in respect of the information obtained, far beneath expectations. The enemy's troops, after the battle has ended, disappear from view, and the thread of fairly reliable knowledge of the enemy, assiduously spun up to that point, is broken. The reason, as already hinted,* lies in the fact that the fight engrosses all attention, and constrains every sense of those engaged in it. And even those not engaged in it allow themselves to be too greatly influenced by its issue, instead of coolly pursuing their own way. Even though the main body of an advancing cavalry division be repulsed by a more powerful opponent, it does not follow that the whole chain of its patrols should retire with it. For the latter the very best time for making observations is while the entire attention of the enemy is centred in the combat.

The agency of spies may be of value during the period of preparation for war, when the ordinary channels of correspondence are still open, and when the immediate transmission of information is less pressing than during battle. During the progress of operations, engagements and battles, only the latest intelligence is of value, and a spy is not capable of furnishing this, since he lacks facilities for telegraphic communication with the party whom he serves. In order to make personal communications, he must make cautious détours, and will thus, in almost every case, arrive too late. If, however, operations come to a standstill, as in sieges and struggles for strong positions, he can resume his former part

* Vide p. 100.

according to the rules of the art, gaining the confidence of a man of standing in the enemy's country, foisting on him a clever spy in the capacity of coachman or valet, and in that way giving the latter entry into the enemy's camp. Such tortuous methods in the present day are rarely of any use. As a key to the situation of the enemy, to the feeling of the people, the army, and influential personages, to the state of preparedness, the finances, &c., the detailed reports of clever spies may occasionally be very acceptable, but persons of the proper degree of education cannot always be found for this questionable service. Such persons will, moreover, frequently be obliged, for the sake of their own safety, to enter into relations with both belligerent parties, and thus, whilst we receive intelligence from them, we supply the enemy in return.

That the spy of romance, who on the evening preceding the battle arrives on a foam-covered horse to deliver to the commander-in-chief the "plan" of his opponent in minute detail, is even a creature of imagination, needs no further discussion, since we have learnt to know the nature of "plans of campaign."

Another important medium in the service of the intelligence department is the *press*, not only the great journals, but also the small local press. Of course, even the best informed paper will neither be able nor willing to make known the situation of its own country in its entirety. But here again the truth is sifted out from numerous petty details. Other flashes of light have often so far lit up the picture of the enemy's situation, that only a breath of wind is still wanting to rend asunder the last remaining film of mist. The presence of a high commander is mentioned, a letter is made public in which the writer mentions his corps and its station, or narrates an engagement, describing in detail all the circumstances, the regiments, and the commanders concerned. Each detail, though by itself quite insignificant, may yet serve as a valuable link of a complete chain of circumstances. Add thereto the confiscation of letters, the stories of

prisoners-of-war, the statements made by inhabitants or travellers, and safe and valuable deductions become possible. The national press cannot be sufficiently warned to exercise caution during a war. The hunger for news, with its possible pernicious results, must be suppressed with a strong hand, though also with due regard to public feeling. It would be better to appoint responsible men to edit the news items intended for general information, than by attempting to close all sources of communication to incite incompetent and irresponsible persons to independent action.* King Frederick himself once acted as reporter of his headquarters, and Scharnhorst proposed as the most practical medium the publication of a special war-journal for the notification of cases of distinguished bravery, and of miscellaneous reports from the seat of war. It is, at all events, not sufficient to regard the press with mistrust, but it is essential to direct its efforts into proper channels.

International intercourse has always, even in time of war, found its outlets. The weight of commercial interests cannot be under-estimated. The prospect of gain helps over many, otherwise apparently insurmountable, difficulties. Napoleon, who was perfectly well alive to the fact that the commercial world has always abundant private information, before the war, on September 3, 1806, ordered Marshal Berthier to have all letters coming from Russia opened in Augsburg and Nuremberg, in order to find out what was happening there. The telegraph facilitates, of course, all communications in a manner previously never dreamt of; it neutralises almost completely the delays due to circuitous détours. General von Manteuffel, on February 1, 1871, was still engaged in a hot action with the rearguard of the army of the East which had retreated by Pontarlier into the high Jura. On the morning of the same day a telegram was

* Colonel Blume, "Strategie," p. 126. "The best means of holding a fairly even balance between conflicting interests consists in the regular publication, by the military authorities, of any war news which need not be kept secret from the enemy."

despatched from Berne to the Minister of the Swiss Confederation in Berlin, with the intelligence of the army having passed on to Swiss territory. It was forwarded to La Barre, near Dampierre,* the former headquarters of General von Manteuffel, thence was sent over slippery mountain-roads, a distance of fifty-five miles, by relays to his new headquarters at Pontarlier, and arrived there in the night of February 2. It was the first confirmation of the fact that the enemy was relinquishing the struggle, after the mountain valleys had re-echoed far into the gloom of night with rifle volleys and the dull roar of artillery-fire. News has reached the theatre of war with similar expedition by way of adjoining neutral countries. *Embassies, consular agencies in foreign countries* far from the theatre of war, can thus render good service to their country. The international telegraphic communications must be carefully watched.

Even the telegraphic facilities of the enemy have, under certain circumstances, been made use of within the area of hostilities. During the campaign on the Loire it was concluded, from certain indications, that appliances had been fitted by French Engineers to the German wires, and that messages were being intercepted, and shortly afterwards the same methods were successfully tried by the Germans. The artificial means of conveying information, by means of the heliograph, underground wires, balloon, pigeon or dog post, communications by means of bottles consigned to running waters,† &c., belong rather to the province of fortress warfare than to that of operations in the open field. The latter will in the future also be too mobile and changeful to afford much scope to such methods, though a temporary pause in active operations may occasionally facilitate their application.

It is extremely important to *organise a proper system of military reporting within one's own army.* The case may

* South-west of Besançon.

† By this well-known means Metz endeavoured to open communication with Thionville, which lies further down the Moselle.

easily occur that the sum total of the information held by the troops generally is perfectly sufficient to form an idea of the enemy's situation, while still the commander-in-chief lacks the most essential intelligence.

To begin with, it is difficult for the inferior commanders in touch with the enemy, to decide whether what they observe is of importance to the higher authorities. And then, the officer of a lower rank often holds an exaggerated idea as to the omniscience of the commander-in-chief, and erroneously concludes that he must be already acquainted from other sources with whatever information he could supply. In many cases also a person not directly charged with the duty of gathering intelligence may be deterred by a certain modesty, or the fear of being suspected of mistaken ambition. Besides, every one is sufficiently absorbed in himself and in his own particular business. He profits by the news which comes his way first of all in his own immediate interests and is apt to forget to pass it on. The hotter the crisis, the fewer will be the reports, because subordinate leaders will not find time to make them. Cases are not rare in military history of a superior commander eagerly awaiting news from his generals, and of these being in possession of the desired intelligence, which is nevertheless not forwarded. *It may be laid down as a rule, that every commander must make his own arrangements for obtaining any intelligence he needs.* This is not meant to imply that each on his own account should send patrols and officers to keep touch of the enemy, but rather that full benefit should be derived from the work of others. To this end communication between the several parts of the army must be carefully regulated and maintained. The commander-in-chief must continually send officers of his staff to the army corps, which latter, again, rely on their advance-guards, their outposts, and their advanced cavalry. It is essential that these special messengers be free of all other staff duties, so as to be able to devote themselves entirely to the work of reporting. It has already been mentioned that it is necessary to entrust an officer at head-

quarters with the control of this service, in order that it may not cease to work at the moment when both the commander-in-chief and his chief of staff are engrossed by doubtful points which claim all their attention.* As a rule, success is not ensured by the lucky arrival of some particularly detailed piece of intelligence, but by the careful utilisation of many.

The labour of sifting and arranging the material, before submitting it to a preliminary critical examination, is evidently considerable. The grain of pure gold is generally concealed in a heap of sand. The service of intelligence demands extraordinary industry. When a balloon-post was captured and many thousand letters, written on tiny scraps of tissue-paper, fell into the hands of the investing army before Metz, it appeared at first sight as if nothing of value could possibly be found in them, as before being sent off all of them had apparently passed the censor. But when they had at length been sorted, and the names and addresses of the senders had been examined and compared, a fairly clear idea could be formed of the distribution of the enemy's camps within the area of the fortifications, and many valuable deductions were made regarding the state of mind of the beleaguered.

Criticism must not be restricted to a mere verification of reports, but must extend to a classification of their contents according to their value. The knowledge gained in time of peace is at first still complemented by the records of ministers and country, and consular agents, till they break off at a certain point, and are replaced by newspapers and miscellaneous publications. Spies report as to the feeling in the country, and also give intimation of the intentions of the enemy, in which hearsay is usually blended with personal theories. The reports of the troops, especially those of the cavalry, however, first supply a somewhat firmer basis to the results obtained by other agencies, and confirm information received or indicate the degree of credence to be accorded to it.

Yet the most difficult thing still remains to be done,

* Vide p. 100.

namely, to *turn to account* the information received. Military history usually only transmits items, the importance of which has become apparent after the event; and if they be read divested of the padding enveloping them at the moment of action, it often appears inconceivable how an error could possibly have been made. But we must bear in mind the whole existing tissue of deception, vagueness, and obscurity, in order to understand the difficulty of discovering the truth. The commander-in-chief who is generally obliged to base his own decision upon the confusing mass of incoming intelligence must, generally speaking, be guided by the law of probability, and in the case of the enemy, too, he must assume rational action. An inflexible clinging to intrinsic probability and persistent disregard of negative indications is apt to lead back to preconceived ideas, and may be the cause of fatal errors. How often does not the improbable occur in war! It should, therefore, always be deemed possible, never be lost sight of, and, in the event of repeated confirmatory indications, even be believed in. Firmness and elasticity of mind should hence exist in due proportion, although it is impossible to lay down rules of guidance for every turn of events.

The general in chief command must, above all, form a decided opinion of his own and adhere to it until doubts created by negative indications prevail and gradually evolve a better theory. The national characteristics of the enemy, the personality of their commander, the sentiment of the moment, which may be supposed to exist in the opposite ranks—all these are things which must be taken into consideration, because they are factors constantly at work. A thousand matters must be considered, but without undue hesitation. A tendency to credulity is equally wrong as undue mistrust. Power of imagination, by whose aid to complete a harmonious mental view from rough outlines, and the faculty of psychological penetration, which enables one to fathom the depth of human minds, must go hand in hand with professional knowledge and experience. As the physician bases his diagnosis less on the patient's symptoms than on

his general physical and mental condition, so also must the general be capable of forming his opinion of the enemy on a combination of signs. Prominent talents in this regard are a gift of nature; practice can only develop the *coup d'œil*, but cannot create it.

6. *Marches, Conveyance of Troops, and Quarters.*

"When we march along o'er hill and dale in the winding lane of the wood, with loose extended ranks, and music and song fills the air, my heart expands, and I am filled with joyous hopes and anticipations. . . . It is, in truth, an æsthetic impression, that given by a passing martial host; but be it understood, I am not now thinking of our reviews. Distinct from the latter, we here do not behold rigid lines of troops, but in these open ranks we see displayed individuality in all its fulness, and together with the quietly progressing motion we are struck by much diversity and expression of life. Each individual with his accoutrements gleams through the green boughs of the young wood, and even when the man has disappeared from view, his arms still sparkle through the cloud of dust which rises high above the verge of the valley, and discloses to those afar the track of a hidden army. Even the toil bespoke by the exertion of the men in the ranks, with their guns and baggage, slowly mounting the hill, adds a happy touch to the picture. The impression of greatness produced by even a small troop of soldiers, banded together for a long and tiresome journey, to terminate on the scene of countless perils, combined with the lofty and sacred aim, which one and all pursue, lends to this picture, in my mind, a significance that deeply affects me."

In these words Clausewitz, in one of the letters of his youthful days, describes the march into war; and every soul, able of sharing his sentiments, will feel the inner truth of this charming sketch. The sublime impression made by the gleaming columns when, to the rousing strains of music, they pass through stirring towns, and the inhabitants rush to the

windows and doors or the curious crowd collects in the streets and hails the passing soldiery with jubilant shouts, cannot escape a mind even less poetic than Clausewitz's. The love of wandering awakes in the human breast, and the new countries which one learns to know, excite the fancy. Youth always gladly changes scene and mode of life.

Such exhilarating moments are, however, but rare breaks in the monotony of a day's march, and one is more apt to enjoy them when riding on a good horse at the side of a column, than when labouring along on foot in the midst of the throng.

Slowness and laboriousness are the characteristic features of the march of great masses of troops. That becomes evident when, after the music has ceased, the individuals are regarded face to face, and not from a distance, as in Clausewitz's supposition. Here a poor fellow is limping along by an extreme effort, the heavy knapsack on his back and the rifle on his shoulder, and we, too, seem to feel in our foot the pain caused by a chafing boot. There we observe another, his face bathed in sweat, and his wan features clearly showing complete exhaustion. Now and then a weary man is led to the side of the ditch and collapses. From hour to hour the column labours along more painfully; men, horses, and vehicles all covered with dust which hardly allows of the eyes and lips being opened. The sun shows no pity, and inexorably darts its scorching rays against the sides of the hill along which the road winds, thus generating an unbearable heat. Only the head of the column still marches on with some measure of freshness; the further back we go, the more wearily do we find all dragging along; even song has ceased here. The longer the column and the more guns and heavy carriages accompany it, the heavier is the going, and the more frequently do stoppages occur, and many an involuntary halt is caused. The smaller the body of troops, the more easily and comfortably they march, and the quicker their rate of advance. In no respect does the fancy of the future commander, who only knows war from books, stand so

much in need of rectification as with regard to the slowness with which great columns on the march move. In spirit he directs them by the map, according to the inspiration of the moment, now here, now there, sees them anticipate the enemy in reaching and occupying certain important positions, deploy and proceed to attack, all this without any interruption. But, translating this ideal picture into sober reality, we find that the act does not, by any means, keep pace with the thought, but invariably lags far behind it. The columns advance with a consumption of time trying alike to patience and ease of mind, and the danger of the enemy being first to reach the longed-for goal seems to grow with each minute. To the enemy, not under direct observation as our own troops, our fancy lends wings, and we imagine to see him hurrying up with giant strides.

And then it becomes patent that the orders were given too late, and that the time allowed for the movement was underestimated. But there are no means at hand for imparting to the great general mass of men the fiery ardour consuming their inexperienced commander. The heavily burdened musketeers respond with indifferent mien to the urgent solicitation of the man sitting high on horseback, and scarcely step out more briskly while immediately under his eye, only soon to fall back into the old dragging pace. Experience has taught them that, were they to respond on every occasion to such an appeal with extraordinary effort, they would soon reach the end of their endurance. A whole command can only be brought out of its snail's pace with most infinite difficulty; only the roar of cannon will quicken the step, if the troops that hear it be brave. Very remarkable are the extraordinary diversities in marching performances, which cannot always be explained by difference of nationality and temperament of the soldiers. A march of nine or twelve miles, which on the map appears insignificant, becomes almost destructive in its fatiguing effect; whilst, on another occasion, double the distance is covered without any apparent hurt. Wind, weather, roads, internal disposition of the troops, the

after-effects of past exertions,* practice, which here, more than in any other operation of war, makes the master, and, lastly, the personal influence of the commander, are of influence. Where about fourteen miles are considered by us as a good day's work, for which the soldier under ordinary circumstances requires six, but under difficulties eight or even ten hours, his whole time thus being completely occupied, we find Buonaparte, when crossing the St. Bernard with his army, performing the same feat seven days in succession. Twenty-three, twenty-seven, or thirty-two miles were nothing extraordinary for him, moving a whole army corps in an easy country. Murat's cavalry in the pursuit of the Prussians in 1806, did more than eighteen miles a day for weeks together.† In modern campaigns many instances of equal, and even greater, performances are on record.

On the afternoon of December 16, 1870, the 9th German Army Corps stood in readiness at La Chapelle Vendômoise, between Blois and Vendôme. Upon receipt of news that the German positions on the Loire were threatened, Prince Frederick Charles, about nightfall, set the corps in motion towards Orleans, distant almost forty-one miles; and this although part of the troops, before arriving at La Chapelle, had already marched nine miles, and then passed several hours on rain-soaked fields. The roads to Orleans were bad, the road metal cut up, and the meeting with convoys, which followed the second army, checked the advance. In spite of

* This was seen, for instance, in the march of the Second Army from Metz to the Loire. Although the marches were at first not long, and were made in good weather, and upon good roads, yet considerable casualties occurred; for all the troops had, immediately before the capitulation of Metz, undergone a very exhausting and exciting time subject to many hardships. Although the exertions of the march were subsequently increased, yet the losses diminished, because the soldiers gradually recovered their strength, and regained the habit of marching.

† Murat marched first in pursuit of Hohenlohe from the battlefield of Jena to Prenzlau, then in pursuit of Blücher to Lübeck, and thence by Posen to Warsaw, which latter place he occupied on November 28, 1806. He had thus, within one and a half months, covered altogether 188 German (about 860 English) miles.

this the army corps reached Orleans at noon of the following day without any appreciable loss. Forty-six, forty-eight, and fifty miles respectively had been covered by the troops in from thirty-three to thirty-six hours, including part of the night spent in rest, as well as the halt at La Chapelle. One battalion which made the march could boast that it had not lost a single man ; of 4000 horses thirteen had dropped.* This performance can bear comparison with the best on record. Suwarow, in June 1799, marched from the vicinity of Alexandria to the Tidone, also fifty miles, in thirty-six hours. Junot, in November 1807, in his march upon Lisbon, did the 160 miles' distance from Salamanca through Ciudad Rodrigo and to Alcantara in only five days, and that through an inhospitable country and in a thick snowstorm. He continued his movement upon Lisbon at a similar rate ; but the army, after suffering enormous losses, became almost completely disorganised.

Notable marches were made in the course of the strategical concentration of the Bulgarian Army for the war with Servia in 1885.

During the war in Thessaly, in 1897, the Reserve Brigade Haidar Pasha struck its camp at Larissa on May 5, and reached

* A remarkable march was made by the Infantry Regiment No. 14, in the period from November 4 to 10, 1870, from the neighbourhood of Metz to Paris. It accompanied the train columns and artillery of the 2nd Army Corps, the greater part of which was forwarded by rail, and covered 193 miles in thirteen days. Its loss in sick, &c., amounted, during the whole period, to 136 men, out of a total strength of 2547. It must be remarked that this regiment had, since August 18, lain before Metz, and had thus not had steady practice in marching.

The 10th Army Corps marched twenty-three miles to the battle of Vionville on August 16 ; the second corps to that of Gravelotte, on August 18, between twenty-three and twenty-eight miles.

The 18th Infantry Division, on the march from Le Mans to Orleans, on January 26, 1871, covered the distance of twenty-five miles from St. Calais to Morée.

The corps artillery of the 2nd Army Corps, with the 3rd and 4th companies of the Infantry Regiment No. 14, in the Jura campaign, January 29, 1871, marched twenty-five miles from Poligny, *via* Champagnolle, to Nozeroy, through deep snow and across a mountain-ridge. Many similar examples could be quoted.

the battlefield of Pharsala during the night. It resumed its march on the 6th to reinforce Haki Pasha's division at Velestino, and, moving by Bakratsi over the difficult mountain tracks of the northern slopes of the Kara Dagh, reached its destination on the afternoon of the 7th. Though fifty-two miles had been covered in forty-four hours, during stifling heat for part of that time and with no other food than a little hard biscuit, the troops arrived fresh and cheerful, proceeding immediately on outpost duty. This performance is the more notable, since the brigade consisted only of redif-battalions.*

To quote examples from antiquity seems rather ill-advised, since the narratives available to us have not been subjected to the severe test of modern historical criticism. Moreover, the facts mentioned suffice to show the liability to grave illusion, which is incurred by basing one's calculations on average marching results. The margin is indeed a very wide one.

That an army which excels in marching enjoys great superiority over its opponent, follows from the simple fact that its commander is always in the position of being able to mass his troops more quickly and can thus attack with superior numbers. This would seem the origin of the saying "to beat the enemy with one's boots." During the battle, a momentary impetus may work wonders, but not so during a difficult and protracted march. It is difficult to urge forward a tired-out column on the march, even by the application of severe methods. Once a few hundred men are lying in the ditches, the possibility of punishment ceases, and those so inclined may throw themselves down and remain behind with impunity. A body of troops is rightly judged by the number of stragglers which it leaves behind during a fatiguing march, and the value of internal discipline is clearly attested by pro-

* According to a German authority (Major Falkner von Sonnenburg) the march really amounted to from 95 to 100 km. (practically sixty-two miles), accomplished in forty-two hours. An exact computation is impossible, since the brigade strayed on May 5, and the windings of the mountain paths can only be estimated approximately.

ficiency in marching. The importance of the individual factor is exemplified by the many instances in which armies, in other respects inefficient, after a series of defeats suddenly develop a marvellous tenacity and rapidity in marching. The fear of the pursuing enemy, the instinct of self-preservation, in such moments rouse each single soldier, and thus promote collective power of endurance.

Systematic practice in marching in time of peace is essential, and in an army inspired by a lively sense of duty constant opportunities present themselves in its frequent tactical exercises and its marches to the manœuvre ground or to the rifle range. But special exercises, in which long distances are covered solely in order to practise marching, must not be omitted.* It is true that owing to the nature of the organisation of our national armies the men with which we enter upon a campaign are not, for the most part, those actually in the ranks during the period of peace immediately preceding. Yet the assertion so frequently heard, that it is, therefore, not worth while to accustom the troops to hardship is a false one. The purely mechanical aptitude is certainly lost very quickly, directly the soldier joins the reserve and resumes the life of the ordinary citizen, but the tradition of great achievements is an important factor. An exertion which, by previous experience, a soldier has learnt to regard as anything but extraordinary, he endures far more easily than one quite strange to him. If the fatiguing exercises and the long marches in time of peace were discontinued, the army would lose by degrees the standard for measuring what human nature can endure without prejudice, if only a little good-will be present. The demands are lowered year by year. Commanders, as well as soldiers, gradually accustom themselves to regard a moderate performance as something great, and it will at last become so purely through the effects produced on those concerned. If, perchance, during the heat of summer a casualty occurs at one of these fatiguing prac-

* In order to maintain the interest of the troops, such practice marches should, if possible, be combined with short tactical exercises.

tices, and a young man in the prime of life falls a victim to sunstroke, or dies in consequence of over-exertion, numberless voices are generally raised demanding the suppression of such exhausting exercises. People do not reflect how necessary it is to give individual experience to every soldier, which, later on, will enable him to face the inevitable hardships of war with quite a different spirit than if he were a complete novice, and will help him to endure them more readily. If everything were to be discountenanced in peace by which an accident might possibly occur, soldiers generally would be greatly sinned against, since they would be enfeebled and rendered inept for war, the chances of losses being doubled at the same time.

The period of long strategical marches, which formerly afforded the best means of making good lost opportunities, is a thing of the past. The troops are often marched immediately from the railway stations against the enemy, and there is no time for training the troops thoroughly in marching, before the commencement of operations. For that reason the first demands made upon them must not be excessive. If the 9th Army Corps had been required to perform the march already mentioned in August in the Palatinate, when the war first began, it would perhaps have lost a third or even half its effective strength. Exceptional efforts may not be exacted till after the war has lasted some time, and abundant good food and exercise have strengthened the muscles, and the weaklings have been weeded out.

Much, of course, depends upon the proper arrangement of marches, but it would lead us too far to enter into details,* and we are, moreover, concerned only with marches in relation to the higher strategy.

The soldier's fatigue on the march is caused less by the fact of his having travelled a certain distance, than by the length of time he is kept under arms, fully accoutred.

* The reader interested in this question should consult the chapter in Meckel's "Taktik," "Von den Märschen," pp. 148–87, that being the best modern treatise on the subject. Blume's "Strategie" (chap. v. pp. 81–90) deals with marches from the point of view of higher strategy.

Fourteen, eighteen, twenty-three, or even twenty-eight miles is not a great day's march for a good walker. Let us only think of the holiday tours, made in youthful years through a mountainous country. That even forty-six miles can be covered on foot in a single day has been proved not merely by professional runners, Albanians and Spaniards, but certainly also by German travelling journeymen and soldiers on leave, eager to reach home quickly. But strolling along in light dress, free and easy, is something entirely different to marching in the ranks in uniform and carrying a full field-kit. The soldier must not be under arms but for the actual time necessary to cover the required distance. All unnecessary standing still and waiting must be avoided. This results in great variety in the orders to be issued. In the case of a large encampment the head of the column must start several hours before the last battalions, and it would be wrong to call the whole of the troops under arms at the same time. If the troops have been scattered the preceding night among the villages, and it was desired, as was formerly done, to assemble them before the march in one place, the troops intended to bring up the rear of an army corps would remain stationary for from five to six hours. Hence the troops are first combined into small groups, according to the position of their respective night quarters, which groups then issue from cross-roads upon the highway and take their appointed places in the marching column, just as several affluents eventually form a big river.

Careful consideration in the arrangement of the marches is also of influence upon the *morale* of the troops. Every extra toil which the plain mind of the soldier recognises as unnecessary, annoys him, whereas he readily submits to a necessary evil, be it ever so much greater. His feeling in this matter is, as a rule, correct, though in no wise regulated by a fixed measure. It has already been pointed out* that, for instance, Blücher's well-known saying, "Night marches are more to be dreaded than the enemy," can lay no more claim

* Vide p. 70.

to universal validity than any other maxim of this kind. Given bright moonshine, troops march upon good roads without any difficulty and almost as rapidly as by day, and even under unfavourable circumstances good troops have always accomplished night marches without detriment. The campaigns of Frederick and Napoleon furnish many instances of this. The 9th Army Corps, on the 16th December, marched late into the night, in order to accomplish four or five additional miles. The instance of the troops of General v. Werder has already been quoted; and how much more a smaller body of troops can perform in night marches has been proved by Commandant Bernard, when he marched with his "Chasseurs des Vosges" from Lamarche to Fontenoy, close to Toul, in order to blow up the local railway bridge. He marched nearly 40 kilometres, upon bad roads, often even across country, and through woods and over hills deeply covered with snow, with 1100 men, in the night of January 18 and 19, 1871, halted the next night, during which he was, however, alarmed, and then marched in the night of the 20–21st, with 300 men, 35 kilometres, and in the night of the 21–22nd as much as 60. Besides this, in this last night, he drove off the small guard, and, after several hours' work, blew up the bridge. He was, moreover, under circumstances of great difficulty, compelled twice to cross the half-frozen Moselle. Under certain conditions it will be advantageous to march by night, in order to avoid the excessive heat of the day. This was done repeatedly by Osman Pasha in 1877, on his march from Widdin to Plevna, and is the usual practice in southern latitudes. Habitual disturbance of the night's rest is to be feared more than the enemy himself, especially when the marches are long and the commissariat bad, as was the case in Blücher's march in 1806. In the same campaign the troops of L'Estocq's corps did much night-marching, and this, too, in the winter, and then without loss of efficiency. In the time from the afternoon of February 2 to the night of February 8—that is, in five and a half days—they made, mostly on by-roads covered with snow, more than ninety miles, for the

greater part marching by night.* In spite of this, on the 8th, the famous march was made to the battlefield of Prussian Eylau, where the small corps decided the issue of the battle.

The long prevailing general tendency to regard a night march as a mortal sin from the military point of view is beginning to subside. In the wars of the future, in which great masses will have to be moved within a narrow space, and several corps will have to use the same road, night marches will become inevitable.

Under ordinary circumstances care must be taken that the soldier can take his full share of sleep, which he needs most urgently in view of the great physical exertions of war. Far worse than an occasional night march is the late issue of orders, by which the troops are regularly kept awake until late in the night. The same is true of an unduly early start. The so-called soldier's rule, that marching from the night into the day is better than the reverse, is false. The first means that no one has previously enjoyed sufficient rest; the second that, with some exertion, the night-quarters are reached.†

Good order during a march renders it easy, and insistence upon it should not be deferred till disorder begins to show itself. But order ought only to have the one object of benefiting the soldier; all annoying pedantry is objectionable. *Exceptional* favours, such as the carriage of the knapsack on wagons, &c., are justified by *exceptional* circumstances. But, if they cannot be granted as a permanency, it is certainly not advisable to pamper the troops with them too early, lest they miss them later on with bitter regret.

Much has been said in text-books about protection on the

* In this calculation the many détours, as well as the marches to quarters and rendezvous, are not included.

† Meckel lays down the rule, that in the case of large bodies of troops only in special cases the start ought to be made in the summer before six and in the winter before 8 A.M. The starting time of the several companies, squadrons, or batteries will even then be at a quite early hour, since they have, first of all, to join their units, and then one of the larger groups of their corps or division.

march; but a body of troops on the march needs but little protection, since, being in motion, it is always ready to fight. Reconnoitring is the proper expression. The enemy is being looked for, and intelligence of him is needed. We know that the advanced cavalry divisions provide for this. It is customary, moreover, that a special advance guard of all three arms should precede the marching columns, whereby the tranquillity of the main body is assured. Otherwise, if shots are fired ahead, if a check occurs, or it is reported that the enemy is close at hand, restlessness and excitement will spread through the whole column, commanders and soldiers be agitated, and the march interrupted. If an advance guard precedes the troops at the distance of half an hour's march, its duty consists in dealing with incidental occurrences during the march, and this produces a pleasant feeling of security in the main body. All know that an impediment beyond the power of the advance guard to remove must arise before they are themselves engaged.

An advance guard must, however, be comparatively weak. It was formerly the rule to employ a third or fourth of all the troops in this duty, a proportion difficult of justification, since the commander-in-chief would part with a considerable fraction of his troops, and create divided authority. The greater part of the advanced guard should always consist of cavalry,* even where divisions of mounted troops are in advance of the column. The duties of the latter are so varied and onerous, that they will not often be able to provide also for the immediate security of the troops in rear, and the duty of keeping up communication with the infantry under all circumstances would be too exacting. That duty necessitates the employment of cavalry with the advance guard, which obtains information from the cavalry in front and quickly passes it to the rear. In many cases where the distances are

* In high or inaccessible mountains, or in particularly impracticable and trackless country of another type, in passing through long and difficult defiles, in passes or upon causeways, where it is difficult to move on horseback, and where large bodies of cavalry cannot manœuvre, an exception will, of course, be made and infantry detailed to form the advanced point.

great, the ground is difficult, or the danger of frequent interruption of the march exists, this advance guard cavalry will be made independent, under the immediate control of the supreme commander with a view to its being pushed farther in advance. It will then be in a better position to guarantee the undisturbed uniform advance of all the troops in rear, than if it were to leave its own infantry on each occasion in order to proceed farther to the front.

Some artillery will always be a useful element of an advanced guard, since that arm is best able to determine whether an obstacle which the enemy causes is seriously intended. Even dismounted horsemen advancing with carbine in hand are easily stopped at a barricade, the edge of a wood, or a village, by a handful of determined enemies, whilst a few well-directed shells from the artillery will soon dispel the phantom. An approaching body of hostile troops can also soon be brought to a halt by a field battery and forced to disclose its strength. It is frequently objected to the detail of individual batteries that it entails the breaking-up of an artillery brigade. Though this objection is generally justifiable, still it may be carried too far. The advance guard battery will often facilitate the coming into action of the other batteries. In the case of very large advance guards, far in front of the main body, or charged with an independent mission, it may be advisable to detail an entire brigade of three batteries, thus avoiding the necessity of breaking up. On the other hand, weak advance guards without any guns are suitable in the immediate proximity to the enemy, when fighting is anticipated, and it is desired to avoid becoming definitely committed by the premature action of artillery.

The advance guard requires only a very small number of infantry in proportion to the strength of the whole force. Formerly it was held that it must possess sufficient to give time for the long column in rear, the main body, to deploy. But *the experience of recent wars has taught us, that the main body never, as a rule, completed its deployment because of the urgent need of assisting the advance guard, already struggling with a*

superior enemy, with the result that the troops had to be launched into the fight by driblets as they came up. This was quite natural. Whether the resistance which the advance guard meets with be weak or strong cannot be definitely determined at the first moment. The commander of the advance guard who halts immediately this appears doubtful, would continually impede the march, and, should it appear that but a weak force was facing him, he would be bitterly reproached. Every good soldier would rather be blamed for too much audacity than for undue caution. If the undertaking turns out badly in the first case, he can, at all events, comfort himself with King Francis, "Tout est perdu, fors l'honneur," which would be quite impossible in the second contingency. Moreover, in an army animated by a spirit of enterprise, no leader will after a war be dismissed who bears the reputation of being bold and enterprising, though on one occasion he showed himself rash. The chances of being shelved would be greater in the case of the man who is credited with being well informed and deliberate, but at the same time too cautious. We may, therefore, be certain that any resolute commander of an advance guard will, in doubtful cases, decide to attack. And if, in addition to his cavalry and artillery, he has with him a whole regiment, or perhaps even an entire brigade, that itself will be a powerful incentive to try conclusions in combat. Who would like to have it said of him that, whilst at the head of such a force, he had allowed himself to be duped or detained by a handful of impudently daring fellows, or that he had allowed a brilliant opportunity for dealing a successful blow to escape him? He would have preferred the risk of failure.

An engagement can easily be broken off so long as only cavalry and artillery have come in contact with the enemy. The distance of the batteries is great, and the mobility of the cavalry enables it to disengage itself quickly. But if the infantry has once come under fire it is very difficult to stop, since it is impossible to give an order simultaneously to the scattered men. If the firing is stopped at one point, it

begins again afresh at another. Signals can seldom be employed for communication with other troops in the vicinity. In the place where one's own men cease firing, the enemy, no longer held in respect, profits by the opportunity to advance, and forces them to resume their fire. Thus, as a rule, the conflict surges to and fro, until the commanders perceive that things must be allowed to take their course. The greater the force of infantry engaged, the slighter will be the possibility of breaking off the action.

If, for example, the commander of the advance guard has only a single battalion at his disposal, he will feel more inclined to halt on meeting with opposition, in order to defer to the decision of the commander of the division or corps. No one expects of him that he should seriously engage the enemy with such an insignificant force of infantry, though it may still be sufficient to brush aside mere feints. Where in an advance the reconnoitring cavalry division, with its batteries and some advance guard of infantry, does not suffice to break through, the necessity of a serious engagement will generally arise, in order to crush resistance, in which case it is best to leave the decision to the commander of the whole force. And thus we arrive at the conclusion that even in the case of a division or an army corps it is mostly sufficient if the advanced reconnoitring cavalry is followed by an advance guard of one battalion. This affords at once the proper protection for the artillery of the advance guard, where this does not consist entirely of horse artillery, which always marches with the cavalry.

If the advance guard is likely to meet some special task—if, for instance, it be intended to seize a certain position—it must, of course, be made stronger, and by its composition be rendered independent of outside support.

Usage in the German army has established the principle of an advance guard for a division consisting of one infantry regiment, several squadrons and a battery, with pioneer, pontoon, and bearer detachments. In the case of an army corps, it is an infantry brigade, to which is added the

divisional cavalry of one or two divisions,* three batteries, and the necessary detachments of auxiliary services. These form the model advance guards, as prescribed by text-books. They are equally capable of gathering intelligence as of performing special duties, and of fighting independently. Their detachment, at the same time, diminishes the difficulties of the march of the main body. Hence they may aptly be described as "ever ready advance guards," and, in this respect, they may be accepted as models. In war, however, conditions will so rarely be of a normal type, without some special circumstances affecting the constitution of the advance guard and rendering it advisable to depart from the standard pattern. These normal advance guards have, moreover, the clearly apparent disadvantage that in the case of a division, a brigade, and, in that of an army corps, a division is broken up, and it is a fact that these same advance guards are most apt to take the decision as to whether battle shall be given or not out of the hands of the generals in supreme command.

The time requisite for deployment is most readily gained by pushing the cavalry far ahead, so that the news of the approach of the enemy is obtained sufficiently early, and the decision as to when and where the deployment shall be made can be formed in time. In case of need, as already mentioned,† the planting of a few batteries, which compel the enemy by a brisk fire to deploy, is a better means of gaining the requisite time than an engagement with a strong advance guard of infantry. The former does not commit us to anything, while the latter usually compels us to accept a decisive battle.

The case is different in marches on the retreat, when it is desired to avoid battle. In that case strong rear guards are necessary in order to check the pursuit where the ground favours such action, whilst the main body remains in

* With the exception of certain squadrons left behind with the main body.

† Vide p. 229.

motion, and does not interrupt its march. But, in the case of the rear guard, a serious engagement is also an evil, because it renders its further retreat difficult, is apt to entail heavy losses, and may even compel the main body to retrace its steps and do the very opposite of that which it is its purpose to do.* Thus, in the case of the rear guard too, the artillery plays an important part, is, in fact, almost the chief arm. Its range and the tremendous effect of its projectiles is the best means of keeping the enemy at a distance,† which is the main task of every rear guard. It will be profitable to temporarily assign to it a relatively larger number of batteries from the artillery of the main body.‡

The principles governing the formation of advance and rear guards also determine the order in which the troops follow each other in a marching column. Part of the artillery, that is, the arm invariably required in the first stage of a battle, naturally follows next to the cavalry. But the fear that the latter might be driven in and the pursuing enemy hurl himself against the defenceless batteries, leads to the practice of allowing at least a small body of infantry to march in front of the artillery. This is also necessary to enable the cavalry being detached from the advance guard in order to proceed farther to the front independently.

The whole of the artillery is not, of course, placed so far forward, as otherwise the infantry in its rear would arrive too late upon the scene of action. The corps artillery of an army

* As a rule it is only towards nightfall that the rear guard may fearlessly engage in serious fighting, since then the enemy lacks the time to make his superiority felt. It should not, however, be forgotten that in our latitude darkness does not set in suddenly, and an active enemy can do a great deal even in the dusk.

† The longer it holds out, the more effectually does it, on this occasion, fulfil its *rôle*. The danger of losing a few guns must be disregarded, and never become a reason for premature withdrawal.

‡ If no longer required by the rear guard, they can, on good roads, increase their pace and rejoin the main body, which has meanwhile marched off, and thus will not even lose distance.

corps, which itself in the marching column takes up about seven kilometres, cannot, on that account, be interposed in a division, because the arrival on the battlefield of the infantry marching behind it would, in that case, be retarded quite an hour, and the commander of the division would have to hold out during that time with only one-half of his troops. It will, accordingly, be placed between the two divisions of the army corps, supposing the whole corps to have only a single road upon which to march.

So far we have considered marches straight in the direction of the enemy. Now something must be said about marches parallel to his positions or at right-angles to the heads of his columns, which are called *flank marches*. These have the reputation of being difficult and dangerous undertakings. Military history, however, teaches us that in the matter of flank marching one may venture more than theory would seem to allow. Frederick the Great at Prague made a flank march round the right wing of the Austrians, and at Kolin even along their whole front. In those days the armies, when once formed up for battle, were hard to manœuvre, for the order of battle must not be disturbed. Hence there was no great reason for apprehension that the enemy, on observing the flank march, would make a counter move; and the king, as a matter of fact, never feared it. All that has now been altered. The separate parts of each army are independent, and are thus enabled to execute counter-strokes against the passing columns. But even now it is difficult to put a large body of troops fully deployed into motion in a direction not previously contemplated. Very frequently the right moment for action passes by during the preparatory movement, or the general is, at least, doubtful whether it will not pass by, and so abandons the attempt. If the whole force of the enemy does not take part in the flank march, a portion remaining stationary,* there will be the danger, in pushing forward between both groups—the moving and the stationary—of being placed in a dangerous

* For instance, in initiating an enveloping attack.

predicament. And therefore it is that, even in manœuvres, flank marches are successfully executed even within sight of the enemy.

Greater still, of course, is the danger, if whilst a flank movement is in progress, the enemy also is in motion. Then we shall do well to pass the heads of his columns, at a comparatively great distance, or divert his attention by a simultaneous attack by parts of the army not engaged in the flanking movement.

In a simple forward movement, it is, generally speaking, of no importance whether the army be met with a mile or two nearer or further away, or where the forces have to be deployed for battle. In a flank march, on the other hand, there is a definite object in view, which it is desired to attain, if possible, without fighting and without delay, and, from that point of view, every interference by the enemy is unwelcome. We watch for his possible appearance with a certain suspense, and thus gain the impression of executing some difficult manœuvre. Besides, it is only human nature to dread a danger which threatens either in the rear or on the flank more than that which one is facing. The soldiers in the marching columns always assume that their commanders suppose the enemy straight before them. If the latter suddenly appears on the flank, the men may easily imagine that they are surprised, and this destroys their confidence. Flank marches, which even the private soldier knows to be such, are easy to execute. This is proved by the numerous marches within the investing lines before Metz and Paris in 1870, for the purpose of concentrating troops at certain points. They all in their nature were flank marches in relation to the enemy's forces stationed between and behind the works of the fortress. But here the whole situation was clear, for every soldier knew that during the march they could only be attacked from the side of the fortress, and the feeling of being placed in an extraordinary position disappeared. The troops marched quite unconcernedly along or close behind the line of investment straight to the point

threatened, because this appeared quite natural. No special precautions were even taken.*

An army corps on the march, unexpectedly attacked on the flank, necessarily forms front to that side, and forms a line of battle some thirteen miles in extent, in which there are various large or small gaps. But the surprise will scarcely ever be so complete as to necessitate a formation of front to a flank on the road itself. There will generally be ample time to reach a position at the side of the marching column. In this position the corps can be more rapidly deployed than towards the head, because the distances become shorter. The rear of the marching column has, as we know, a day's march before it to arrive at the head, but, in order to reach a position three or four kilometres to a side, only half † that distance is to be covered.‡

Where, however, a deployment of a column on the march to a flank is impossible owing to the nature of the ground, as, for instance, in a narrow defile, the situation is worse. But the same features are generally, in such a case, a protection against interruptions of the flank march, since the enemy would lack the means of approach.

The rules of the art of war advise the flank march being covered by a special corps, which faces the enemy whilst the flank march is executed behind it. But the presence of such corps itself will very frequently draw the attention of the enemy to the movement. At best, it can only be weak, and directly invites the enemy's attack, whilst its purpose is to keep him off. Where, therefore, distance or natural features afford some measure of protection, such means will be dis-

* The protection afforded by the field works within the line was, for instance, at the time of the battle of Noisseville, in many places very slight; they were, moreover, at most times occupied merely by outposts, in order to have sufficient troops available for fighting purposes.

† I have taken the width of the position of the army corps at four kilometres, and calculated that the troops at the rear of the column need only reach the flank.

‡ Only when the position to be taken up is parallel to the head or the tail of the column, the march would be of greater length than in deploying to the front. But such a case will scarcely ever occur.

pensed with, and precaution be restricted to a careful observation of the enemy by cavalry. The subsequent withdrawal of troops employed to cover a flanking movement will often prove difficult and cause a general delay. When, in 1866, Benedek executed his "well-ordered flank march" from Moravia to the Upper Elbe, he placed the leading corps, the 2nd Army Corps, and the 2nd Cavalry Division, against the county of Glatz. This contributed to delay the execution of the whole movement.

In the Napoleonic period, it was claimed that a line of battle must, under all circumstances, be of great depth. This will, however, be seldom the case, if, when surprised by the enemy while engaged in a flank march, it is required to change front. But in these days we can afford to disregard this precept, as modern weapons of precision give great powers of resistance even to a thin line.

A dread of flank marches must thus be regarded in the same light as a dread of night marches, which it is well to overcome. When, in the future, armies assemble and confront each other on a frontier, the possibility of a very real success will lie in a rapid concentration of troops upon a given point, and that can only be effected by bold and rapid flanking movements. This applies with special force in the case of a chain of barrier forts, behind which the enemy has deployed on a wide front.

A certain amount of precaution in the execution of flank marches is naturally well advised. It will be advantageous to shorten the extent of the whole column by reducing the spaces between the several parts and by marching on a broader front. The baggage and train must not follow behind the troops passing along the enemy's front, if the latter be very close. They must proceed by parallel roads on the side of the column away from the enemy. For flank marches which would otherwise take place under the eyes of the enemy, the night may very well be utilised. Where a flank march is executed by a whole army, care must be taken to ensure that, in case of necessity, troops can deploy in some

strength towards the side. Here is a case which justifies two corps being allowed to follow each other, as close as possible on the road nearest the enemy.* But enough on this subject.

Clausewitz says: "The destructive influence of marches is so great, that it may be ranged side by side with the action itself, as an independent active principle." This is undoubtedly correct. Thousands are constantly marched to death, even when every precaution has been taken. Napoleon, in 1812, on his march into Russia in fifty-two days, during which only 320 miles were covered,† lost by disease and straggling nearly 100,000 men. Bad discipline was probably a contributory cause, but, apart from this, the losses on the march would in any case have been very great. Even if those missing from a column are not dead, still they are, a sa rule lost for the rest of the campaign, overfill the hospitals and quarters on the lines of communication, and are a great burden.‡

If the usually accepted task, according to which an army corps in a single day only advances about the length of its own marching column, may, in special cases, be materially exceeded, the general, on each occasion, will have to consider whether the probable loss will be outweighed by corresponding successes. Forced marches to catch up with a retreating enemy, such as, for instance, might take place on an Eastern theatre of war, will, on account of material losses, probably become equivalent to a defeat. They will even produce a

* When towards the end of June 1866, the Second Prussian Army entered Bohemia, the 6th Army Corps followed the 5th upon the threatened left wing, which in a sense executed a flank march in front of the approaching heads of the enemy's columns. Both were, as we know, temporarily placed under the sole command of General von Steinmetz.

† Calculated in a straight line.

‡ The formation of companies from stragglers for the purpose of garrisoning places in the rear of the army, which was ordered by Prince Frederic Charles in 1870 in the Second Army, proved a success. By this means troops were saved which otherwise would have had to be taken from the army, and the rigorous guard duty to be performed aroused in those left behind the desire to rejoin the army as soon as possible.

deleterious effect upon the *morale* of the troops, since they arouse the consciousness of having made a supreme effort in vain.

Besides marches, the transport of troops plays an important part in modern times. Formerly it was only practised by sea. Napoleon, who knew how to make everything possible, in 1805 and 1806 transported his Guards, and, in 1814, the troops returning from Spain, on wagons. They thus covered about forty-five miles per day. In our days, as we have witnessed, millions are conveyed by rail to concentrate on the frontier.

After the outbreak of war, the transport of troops by rail, if on a large scale, will meet with many difficulties. The lines are fully occupied in transport work of all kinds, while the staff of officials has been weakened by the recall of reservists to the colours. The exertions during the period of the concentration are generally followed by reaction. The rolling stock becomes scattered, the proximity of the enemy is productive of unrest, and the performances may easily fall below expectation. The transport of reinforcements from provinces not threatened is easier than the movement of troops near the front of the armies, where everything is overcrowded. Since, however, the speed of railway trains makes little of détours, enabling us to discard overcrowded lines in favour of those free from undue pressure of work, we may always reckon confidently upon our ability of moving large masses of troops in an emergency. The defender naturally reaps the greatest benefit in this respect on his own ground.

During the campaign on the Loire, in the period from 7 o'clock in the morning of October 27, 1870, to 9.20 P.M. on October 28, 28,000 infantry of the 15th French Army Corps were transported from Salbris, in the Sologne, *via* Vierzon and Tours, to Mer, near Blois and Vendôme—that is, from the left to the right bank of the Loire—without the movement having been perceived by the German troops. By 8 A.M. on October 29 they were followed by sixteen batteries, two regiments of cavalry, ammunition columns, &c. In November

of the same year, 40,000 men of all arms, under General Crouzat, travelled in eighty-eight railway trains from Besançon, on the Doubs, to Gien, on the Loire, in the space of three days. A report of this movement, too, did not reach the German headquarters till after the corps had reached its destination. Sometimes, during the Loire campaign, French military trains were despatched at intervals of ten minutes, or even in quicker succession. On the other hand, the attempt made to rapidly convey the army of General Bourbaki, at the end of December 1870, from the Upper Loire to the valley of the Doubs came to nought, owing to the want of the necessary preparations and of unity in the command. Two army corps and the army reserve, consisting of a division, required seven days to entrain, and ten days altogether were occupied with the whole journey, which it was hoped would be performed in half the time. A corps which subsequently followed the army required the period from January 4 to 16 to arrive at the Upper Doubs, near Belfort, from Nevers, because, in the interval, an abnormal congestion of traffic had been caused by the meeting of transports of troops, war *matériel*, and supplies. It would have been wiser to have resorted partly to marching than to insist upon utilising the railway exclusively, particularly the single line along the Upper Doubs. The existing small railway stations rendered detraining difficult; in the hurry of the moment the laying of temporary lines and sidings was impossible in the narrow valley between the river and the walls of rock.

Still less will the attacker in the enemy's country be able, during the operations, to think of transporting troops on a large scale, even though he take every pains to restore the railroads within the area occupied by him, for traffic.* They

* The following instances of the utilisation of railways in an enemy's country during the French war on the part of the Germans may be cited. The 14th Infantry Division, which, towards the end of the year 1870, besieged the fortresses on the northern frontier of France, was transported thence by railway to Châtillon-sur-Seine in the period from January 7 to 14.

will, as a rule, only suffice to convey to the army its necessary supplies of provisions, ammunition, reserves, &c.

The advantage which railway journeys possess over marches on foot is clear from the fact that, whilst for the latter about thirty-six miles is regarded as the normal performance for twenty-four hours, a train of moderate speed covers 400 miles in the same time. Owing to the loss of sleep the fatigue will perhaps be somewhat greater in the case of the railway journey than in that of the march; but it should be remembered that troops, after leaving the railway train, can at once do a moderate march, and, after sitting so long in the wagons, will generally hail the prospect with pleasure. The difficulty in transporting large masses of troops by rail consists more in entraining and detraining them than in the actual conveyance from one point to another. In the case of single lines of rail, which have no separate metals for the returning trains, a block in the traffic very often arises, and therefore their capabilities must not be overrated, and they must not be depended upon with the assurance justified by double lines. As a rule, twelve trains a day is regarded as the maximum performance of a single, and eighteen a day of a double line. Colonel Blume, after the experience of 1870–71, considers it advisable to assume only eight and twelve trains respectively, instead of the figures quoted, and by adopting this suggestion we would certainly be on the safe

On January 14 the combatant part of the division was concentrated at Châtillon. Then followed the train and the various columns.

After the fall of Strassburg the Landwehr division of the Guards was conveyed to the army before Paris. It began to entrain on October 7, was obliged to take the very busy line *via* Fourard, and did not arrive in Nanteuil till between October 10 and 19.

The 2nd Army Corps was similarly conveyed from Metz to Paris. The 3rd Infantry Division, consisting of ten battalions, a squadron of cavalry, four batteries, a company of Engineers, a detachment of the Hospital Corps, a field-bakery column, a field hospital, a provision column, and 120 other vehicles, completed the movement in twenty-four railway trains in the period from November 4 to 8. The 4th Infantry Division began to entrain at Pont-à-Mousson at noon of October 26. On November 6 the combatant part of this division had, with a detachment of the Hospital Corps, a field hospital, and the requisite columns, assembled at Longjumeau. A part of the corps marched to Paris on foot.

side. It represents the average performance of those of the French lines of the slowness of which there were so many complaints in 1870.

Wherever circumstances allow, railway transport will be preferred to the march, as the casualties due to marching will be avoided by railway conveyance. In every case it is worth making an exact calculation as to whether the goal will soonest be reached in one way or the other. Under ordinary conditions an army corps requires on a single line eleven, and on a double line seven, days in order to get under weigh with all its *impedimenta*. On foot, in eleven days it can cover nearly 140, and in seven days about ninety miles. It thus appears that an army corps as a whole will not gain time unless the available railway tracks are longer than these distances. But very often it is only necessary to have a part of the forces quickly at a given point, and they are then sent ahead by rail, while the rest follow on foot.* Both methods of transport may often be combined with advantage, the infantry being conveyed by rail, whilst the artillery, cavalry, train, and columns march at a somewhat accelerated rate. If the nature of their eventual mission at their destination requires it, some artillery and cavalry accompanies the infantry. On the other hand, the marching portion of the army corps is accompanied by some infantry details to ensure greater security.

The extraordinary importance of railways for the feeding of armies and the supply of men and *matériel*, as well as for the movements of troops, will always induce the invader of a country to convert them as quickly as possible to his own use. The repair of destroyed railways proceeds as the army advances. Temporary connecting lines, like that laid in 1870 between Remilly and Pont-à-Mousson for the purpose of turning Metz, will in future be constructed to a greater extent than ever. Railways are now absolutely indispensable for fortress warfare, since modern siege equipment cannot,

* Meckel, "Taktik" (p. 23), gives a number of interesting instances of this kind.

where the distances are long, be moved by road. Irrespective of the weight of the guns, the amount of *matériel* is so great that, for instance, the arrangements for its continuous transport over about ninety miles would absorb 20,000 horses and 20,000 men. As the daily quantity of ammunition expended during the siege of a great fortress amounts to about 7000 to 8000 cwts. the utilisation of railroads is absolutely essential, for a continuous supply of such a weight of metal could not possibly be carried by wagon on ordinary country roads.*

* The following data give an idea as to the capability of railways in war: A railway train of from 100 to 110 axles and an approximate length of 500 metres can accommodate a battalion with regimental or brigade staff, or a rifle battalion, or a squadron with regimental and brigade staffs and 1½ squadrons respectively, a field battery with regimental or artillery brigade staff, $\frac{2}{3}$ of a horse artillery battery, 1½ engineer companies with 1 divisional pontoon train, finally, either an ammunition or a provision column, a remount depôt, a field hospital section, &c. An army corps, complete in all details, would thus require roundly 100 trains, if comprising 25 battalions, or 108 trains, if consisting of 33 battalions, *i.e.*, if fourth battalions have been formed in the infantry regiments. An infantry division (exclusive of train) would claim from 24 to 26 trains, and a cavalry division (also without train) 20 trains. On this basis the number of days required for the conveyance of a given body of troops can readily be calculated. Assuming, for instance, as above, eight trains a day for single, and twelve for double lines, an army corps would be shipped in 12½ to 13½, and 8½ to 9 days respectively; an infantry division in 3 and 2, and a cavalry division in 2½ and 1⅔ days respectively. By adding the duration of a single journey, the time is arrived at which is required to move the body of troops in question from point to point. Since a military train travels at most eighteen miles per hour, the time required for the conveyance to a distance of, say, eighteen hundred miles would be—

for an army corps, on a single line 13½–14½ days, on a double line 9½–10 days;

for the advance guard of an army corps, 2½–3 and 2 days respectively;

for an infantry or cavalry division, 3–4 days and 2⅔ days respectively.

As shown, however, by instances quoted from the Franco-German War, quite exceptional results may be obtained for a limited time.

During the Russo-Turkish war, Turkish battalions at a war strength of 800–1000 men were conveyed on the Roumelian line in small trains of little more than thirty axles, which became possible by the fact of their being supplied with pack animals instead of vehicles. The carriages, too, were packed to their utmost capacity, and, in the absence of tunnels and overhead bridges, the men even occupied the roofs of the carriages. Numbers of men sat on the footboards, and some fellows, more resourceful than the

The transport of troops by sea, compared with conveyance by rail, has not made much progress, the rapid general development of oceanic traffic notwithstanding.* The shipment of the allied forces from Varna and Baltchik to the Crimea, in the early part of September 1854—63,000 men with 207 guns being carried in a fleet of 330 vessels—still holds the record of modern times. The preparations for this huge

rest, placed house doors or similar material across the buffers, spread their canvas, and made themselves at home. Such expedients, however, require the resourcefulness, serenity, fewness of wants, and the good nature of the Turkish soldier, who always manages to accommodate himself to circumstances.

During the war in Thessaly battalions of 750 men were carried on trains of approximately 80 axles.

See also "Uber die Eisenbahnen im Kriege," in Blume's "Strategie," pp. 91–95; Meckel, "Taktik," pp. 21–25.

* It should be borne in mind that European conditions only are in question.

During the North American War of Secession the transport of troops by sea played an important *rôle*. The Army of the Potomac, under MacClellan, 80,000 strong, was conveyed by sea between March 17 and April 4, 1862, from Alexandria, on the Potomac, to Fort Monroe, on the James River. The wealth of the Americans in means of transportation, and their energy in overcoming technical difficulties, rendered this achievement possible. In comparison with this the transportation of troops by sea during the Spanish-American war of 1898—to Cuba, Porto-Rico, and the Philippines—seems quite insignificant, whereas the Chino-Japanese war produces examples of activity on a much larger scale.

The Second Japanese Army (43,000 men, 3700 horses, 24 field, 24 mountain and 30 siege guns, with provisions and forage for two months) was carried to the coast of the Liao-tung peninsula, north of Talienwan, in the time from October 16 to November 7, 1894. The departure from Japan took place in two divisions of eighteen and nineteen ships respectively, with an aggregate tonnage of 73,000 tons, on October 16 and 18, the embarkation having taken only three days. The disembarkation, however, was greatly retarded by the unfavourable condition of the landing point.

A similar feat was performed by the expedition for the capture of Wei-hai-wei, on which occasion the 3rd Division—25,000 men, with seventy siege guns—was landed in midwinter (end of January, 1895) at Yung-cheng in the Shantung peninsula.

Japan had carefully organised its oversea transport service, a special section of the general staff being charged with it exclusively, while all the vessels of Japanese shipping companies were placed by law at the disposal of the authorities in the event of war. Sixty-nine vessels of an aggregate tonnage of 123,000 tons could thus be confidently relied on at any moment.

enterprise could, however, be made deliberately, and all risk of interference on the passage was absent.

It is true that the speed of freight steamers approaches that of a moderately fast railway train; but no State can keep on foot fleets of transports sufficient to convey whole armies. Even for the transport of a single army corps, only France possesses, in time of peace, an adequate number of public transports. All Powers are accordingly obliged to press into their service merchant-ships, mail-boats, and other steamers belonging to private owners. But the great inconvenience exists that all these ships require a time-absorbing adaptation of their interior fittings so as to make them suitable for the reception of troops. Tables, benches, and clothes-racks must be fitted, hospital accommodation, kitchens, &c., arranged.

Embarkation and disembarkation is a difficult process. The great steamers, each of which, for instance, is capable of accommodating a battalion, have such a lofty deck that horses and boats can only be got on board by means of cranes. The smaller steamers, such as ply in the Baltic, on the other hand, have not sufficient accommodation. A single infantry division, with the necessary complement of columns and train, which, owing to their independent employment, are indispensable to them, would require nearly fifty of such vessels, whilst a like fleet of great transatlantic vessels would contain an army corps. If, however, the specifications as to troop accommodation be less strictly enforced, and the usual anxious care as to sanitation, prevention of accidents, and general comfort be somewhat relaxed, much more may be done. During the war of 1877–78, as also during the Turkish mobilisation in 1885–86, the large 30,000-ton steamers of the Austrian Lloyd took on board, for passages of several days' duration, as many as 3500 infantry, 100 to 150 horses, large numbers of officers, and all kinds of *matériel*. Exceptional results, such as the transport of Suleiman Pasha's army (38 battalions, with 3 or 4 mountain batteries) from Antivari to Dedeagatch, cannot be obtained by any other

means. The Pasha commenced his embarkation on July 16, and part of his troops are said to have been landed at the mouth of the Maritza as early as the 19th.

When harbours are not available, each ship requires 300–400 metres of coast, for purposes of disembarkation, a fleet of transports with an army corps, about fourteen to eighteen miles. As suitable landing-places of such extent can rarely or never be found, the process of discharging must be effected by degrees. This also necessitates the transhipment to smaller vessels, barges and lighters, in order to pass through shallow waters which are still too deep for wading. The caprice of the weather makes all calculation as to time impossible; it may entirely prevent the landing, and a storm may even cause a catastrophe. It goes without saying that great squadrons of transports are very much exposed to hostile attacks, and the danger is greatly augmented by the sinister torpedo. It is essential to secure absolute command of the sea before the transport of troops by sea can be undertaken with any degree of safety. It may finally be remarked that troops conveyed in this manner play only an insignificant part in a war on the great scale on which it is now conducted. That the exact opposite may obtain is certainly indisputable, in proof of which we will consider the case of Constantinople. With the aid of the mercantile marine of the Black Sea, Russia would be enabled to embark simultaneously a force of 25,000 infantry, 1000 horses, 60 to 70 guns, and all requisite details. This represents a quite respectable force, well able to attempt a *coup de main* against the Turkish capital, the more so, as a second contingent of similar strength could follow in from six to eight days. We are, however, aware that the local conditions favour landing enterprises in a manner not to be repeated in any other part of the world, for which reason no general deductions are practicable.

We now come to the objection that the cost of transport by sea is great out of all proportion. Only England, by reason of its situation, its wealth, and the number of its State and privately owned ships of the greatest size, is in a

position to perform anything really great in the way of transporting troops and employing them across the seas. Other Powers must confine themselves to exceptional cases, in which there is no choice. In this category, France enjoys a considerable superiority over other countries.*

River navigation may be of great service for the conveyance of infantry. It will especially be utilised for the transport of provisions for the armies. Frederick the Great, in his various campaigns in Bohemia, regarded the Elbe as his main line of communication. The headquarter staff of the Second German Army, in July 1870, while the strategical concentration was still in progress, organised a flotilla of six steamers and numerous lighters, to serve on the Rhine, between Worms, Mayence, and Bingen, as a moving magazine. The vessels were filled up by purchases made in Holland (which, however, soon closed its frontier), on the Lower Rhine, and even within the area of concentration, as well as from the available stores in the fortresses of Coblentz, Cologne, and Wesel. When the rapid advance of the armies into France took place, the ship's cargoes were discharged into the great magazines in Bingen and Worms.

A question inseparable from the consideration of marches and transport is that of quarters. The soldier who, after a fatiguing march, finds good quarters, rapidly recruits himself, and gains strength for the following day; whilst, if bivouacked in the open field, exposed to wind and weather, he would, perhaps, have become incapable of continuing his march. A prudent regard paid to the quartering of the troops is the best means of counteracting the chance of casualties on the march. We have now arrived at a pitch of civilisation which permits us no longer to regard the wood as our night quarters and the moon as our sun.

If the troops, immediately on the outbreak of hostilities, were to be collected in camps, they would soon be decimated

* In February 1871, the 22nd French Army Corps, 18,000 men and ten batteries strong, was, in a short space of time, conveyed by sea route from the Northern theatre of war to Cherbourg.

without a single battle. Let us only reflect how much our troops suffered during the first rainy days of August 1870. These experiences have led to the reintroduction of light tents, which afford some shelter against the weather, without encumbering the baggage column.* Nevertheless, camping in the open still remains a drawback in our latitudes during the greater part of the year. Although not to be shirked in case of necessity, still, in spite of the new equipment, an endeavour should be made to billet as many troops as possible, and as long as practicable. This is particularly important in the first stages of a campaign, when so many things require adjustment, and the men themselves have to accustom themselves gradually to camp life.

In the Western hemisphere, at all events, the worst quarters are always better than the best bivouac. But bad quarters are nevertheless prejudicial to the condition of an army, and to avoid them is not to be characterised as effeminacy, but rather is enjoined by very rational considerations of health.

He who has seen war knows how rapidly the means of existence become exhausted in the path of an army. The overcrowded quarters afford no sustenance by day, no rest by night. A wide distribution of the men is therefore necessary, and the affluence, occupation, and mode of life of the inhabitants must guide the decision. In the open country, where agriculture is the sole occupation, a billet for one man to every soul is the general rule, if the quarters are to be comfortable. In the case of manufacturing towns, industrial villages, mining districts, and large towns, an exception must, of course, be made. Berlin, with its approximately two million of inhabitants, would never be able to accommodate a corresponding number of soldiers, whilst a fairly well-built

* Only some few European armies, such as the Turkish, have retained even for use in times of peace the old pattern tents, which require to be carried on pack animals or wagons. The troops use them either because other quarters are not available, or because they are rightly considered more sanitary than the neighbouring habitations. In winter-time double-walled tents are used, which afford the required protection against cold.

village can shelter even more than its proper population. Under average conditions an army corps of the usual strength requires thirty to forty square miles of country, which is approximately the square of the length which it takes up on the march without its train.

Bivouacking in the open certainly makes it easy to set the reposing masses again in motion. A quarter of an hour after the order has been issued the movement can commence. Much time will be saved by commencing the march on a broad front, so that it will not be necessary to form a column of march. Troops arriving in driblets from scattered districts would be obliged to form up first of all. In bivouacking, moreover, the marches to and from quarters are saved. But all these advantages will not, except under special conditions, compensate for the disadvantages of the bivouac.

One of the latter is that troops in camp are much more readily discovered by the enemy and their strength ascertained than when they are distributed in quarters. On a dark night the reflection of great bivouac fires can be seen for many miles, while in daylight, especially towards evening, the smoke can be observed from an equal distance from any fairly elevated position.* Still, the lighting of fires must not be forbidden, except for very special reasons, lest the troops suffer intensely.

Napoleon constantly bivouacked with the "grand army" when advancing, in 1812, from the Vistula to the Niemen, hence the rapid forward movement of his masses of troops, but also their great losses on the march. The opposite mistake was made in 1806, in the retreat of the Prussian army, when the troops were so widely scattered over villages and towns in order to provision them, that the marches were inordinately extended and the night's rest was lost.

On the possible theatres of war in Western Europe there

* From the church tower of Pithiviers, at the end of November 1870, when the sun was near the horizon, the smoke of the great French camp at Gidy and Cercottes, before Orleans, could be discerned, although twenty-three miles distant.

will usually be employed a single method of quartering the troops when once operations are in full swing. On the completion of the day's march the toops will be immediately distributed over every locality within reach, with utter disregard of rules, billeting tables, or statistical data, and each unit will make itself at home in some village. Those who cannot find quarters by any means will remain outside, pitch their portable tents, or use them to screen off the wind, construct shelters of brushwood or straw, and, as a last resource, may even seek shelter under doors, boards, &c., leaning against the walls of houses or gardens. The waterproof sections of shelter-tents again come in handy for roofing airy habitations of this kind.* The term "town encampment" or "town bivouac" (*Ortschaftslager* or *Ortsbiwak*) has been coined to describe this type of lodging, and has eventually received the official imprimatur in our Field Service Regulations.

In olden times camping was considered necessary for the safety of the troops taking their repose, it being held that it would otherwise be impossible to form up in sufficient time to meet a sudden attack. The idea of quarters was always one of the widest imaginable dispersion. But since we have acquired the knack of huddling together in houses, and to disregard the derangement of the normal order of battle, this fear seems groundless. It is at variance with the simplest rules of common sense to encamp outside a village and then to occupy it in a hurry in the event of an attack being made by the enemy, as often happened in olden time. It is better to take up quarters there at once, since watchfulness and preparedness for combat can be observed equally well inside as out. The several units lie together in large buildings and

* It has been found that shelter-tent sections can be used in the construction of floats for hurriedly improvised bridges. They may, for instance, be stretched over light packing-cases to make them watertight, so as to allow of planks being laid down. If stuffed with straw, reeds, or hay, they will retain buoyancy and bearing power for a fairly long time, and may be employed in the construction of rafts, similar to the "keleks" of the East, which are made of inflated sheepskins.

farm premises. Each can readily find its way in sufficient time, prepare for defence, and make suitable arrangements. If the enemy appeared, all would be at their proper stations much sooner than if the troops had bivouacked outside and had to enter the place to be defended in the darkness of the night. The precaution must, however, be observed to quarter the troops in some sort of tactical order, each unit in the part of the place which it is eventually to defend. Even at the times of impending great decisions, when considerable masses are concentrated within a very narrow area, and tents and straw or brush shelters cannot be entirely avoided, as many troops as possible will be placed in the neighbouring villages. The advantage of housing does not alone consist in the fact that the troops are resting sheltered from the weather, but also in that they find cooking appliances, which facilitate the preparation of their food. This, in the open and with inadequate appliances, is always difficult, and, when the wind is strong, even quite impossible. The dust upon the sand-fields of the Mark sometimes makes, even in peace manœuvres, all cooked food uneatable. Moreover, even the most densely packed places generally afford a welcome addition to the supplies furnished by the columns and provision wagons. Thus the advantage of better food is also combined with the advantage of quarters. It is also so much easier to clean equipment and clothing indoors than in the open. In the winter campaign of 1870–71, the German troops did not hesitate, even during the progress of battles, to seek night-quarters in the villages and farms lying close to their posts. This was the case at Beaugency, at Le Mans, and on the Lisaine. Even if a body of troops be for once surprised and suffer losses, as at Beaugency, yet this disadvantage is as nothing compared with that which results to the troops when, from fear of such disasters, they are made to bivouac permanently in the open. The worse the season and the weather, the more necessary will it be to resort to cantonments and crowded marching quarters. A few nights unnecessarily spent in the open may equal the effects of an

unfavourable battle, and are always worse than occasional night-marches. The greatest difficulty will always be experienced in the accommodation of the horses, especially those of large masses of cavalry. The horses and men of the columns and trains find some shelter from the wagons.

Every body of troops which has a place assigned to it as quarters is naturally jealous of its temporary right of possession, and looks askance at the uninvited guest or the bold trespasser. As it is appropriate in every large place to assign the various quarters to the different units, so also must the headquarter staff issue clear instructions to subordinate commands as to the area they are to occupy; otherwise conflicts are inevitable. In matters affecting quarters and commmissariat, selfishness comes to the surface. On this principle the commander-in-chief will define boundaries for the army corps, and the general commanding a division for his division, the corps artillery, the trains and columns. In arranging this, it is not sufficient merely to define the boundaries, but it is also necessary to add to which body the several places within them shall be allotted.

The nature of these allotments depends on circumstances, and must be guided by the intentions of the commander. Whilst in motion, it is best to select long narrow strips of land, of the depth of the columns on the march, on either side of the main road. The troops are "echeloned" upon it, to use the military phrase. It is thus quite correct that the hindmost troops of an army corps be quartered thirteen miles from the head, since they require this distance, in order to be able to resume their place in the marching column on a fresh start being made.* How far it is permissible to spread out right and left, depends upon the situation of the roads and villages. If a détour of more than four miles from the main road were made, and the particular body of troops were the next morning required to move back to it, the equivalent of a second day's march would be imposed, and it would probably be better to endeavour to find quarters further ahead. Occa-

* The trains and columns look for their shelter further back still.

sions will be rare on which troops will go more than two or three miles away from the main road. In this case, certainly, the space necessary for comfortably quartering is not obtained, but the quarters will nevertheless be sufficient for a single night. If a halt is made, or if a prolonged stay in any locality be proposed, the troops can easily spread out. In that event, a square or circular form of cantonment districts commends itself, the best place for the headquarters being in the centre, whence communication with all parts will be equally easy. The same plan is pursued when a local defence is to be organised, because then it is essential to be able to concentrate the troops rapidly in proper order.

In order to make full use of existing houses and stables a combination of the three arms will be placed in the several localities. But it immediately follows, that the normal order of march, in which the whole movement has been begun, cannot be maintained for long. According to the position of the quarters, smaller groups of all three arms are formed within the larger combinations, for instance, within the army corps and the divisions, brigades with some cavalry and several batteries will be grouped, which thus remain combined for the march. The corps artillery only the commanding general will prefer to keep out of the confused mass and cause it to follow in a compact body.

The endeavour to restore the original tactical order of all regular combinations must never be relaxed; but it is advisable to profit by favourable opportunities, when this can be done without imposing extra exertion upon the troops engaged, since every movement entails consumption of force as much as an engagement.

In this sketch of marches and quarters, movements of troops across extensive barren tracts, devoid of roads and habitations, such, for instance, as Napoleon traversed in 1812, have not been taken into consideration. Housing will there be an impossibility; to say nothing of drawing food-supplies from towns or villages occupied by the troops. Camping must be resorted to, with its doubly prejudicial effect on the

troops if an inclement climate be added to general inhospitality. In such situation it behoves to consider how far the necessities of the case can be met by extra means of protection, the provision of large weather-proof tents,* or, where a longer halt is made, by hutting on a large scale.† As they must live to a greater extent upon the provisions brought from the base, than in a fertile and thickly populated country, the provision wagons must not follow at the rear of the marching columns, as otherwise, upon the bad roads, they would but rarely reach the head of the column, and then never at the proper time. Some parts of the commissariat must be attached to the troops and wedged in between them. Other similar departures from the usual order will suggest themselves from time to time.

The care, ability, and experience of commanders, and especially of the general staff, has full scope to manifest itself in the dispositions for the march and the quartering of the troops. In war there is much more marching than fighting. Hence that greater necessity of every effort possible to lessen the difficulties attendant upon the march.

Having familiarised ourselves with the manner of moving troops, it is fitting next to examine the best methods of employing them in the ever-changing problems of war. But, for this purpose, a preliminary examination of both so-called primordial forms of combat is indispensable.

7. *Attack and Defence.*

The topic of "Offensive or Defensive" was ever a favourite theme with military theorists, for the question, Which form of warfare is the stronger of the two? is quite as fascinating

* Similar to the store tents now used at manœuvres.

† It will be necessary to provide for hutting material being stored in large quantities close to the station where the troops are to detrain on the frontier, as well as in the larger fortresses, because it is particularly important in the first days of the war not to allow the troops to suffer; if, on the other hand, this precaution be neglected, men will soon be collected in such numbers that bivouacking in the open will become unavoidable. As we know, Austria has made provision of this kind in Galicia, and Russia in Poland.

as the answer to it may be varied, according to the thousand and one hypotheses that may be adopted as the basis of argument. Clausewitz says: "The defensive form of warfare is in its nature stronger than the offensive." Blume maintains: "The strategical offensive is the more effective form of warfare." Treatises upon this subject sound for the most part as though attack and defence were exclusively a matter of free choice on the part of combatants, whereas in reality this is hardly ever the case. Circumstances will from the first assign to the one side the offensive, to the other the defensive. It is, therefore, much more profitable to study the particular requirements of the two forms, than to make a comparison between their respective inherent advantages and disadvantages. It is even doubtful whether it is at all in order to attempt such a comparison.

As a rule, we distinguish between *strategical and tactical offensive, and strategical and tactical defensive*, though fundamentally both are the same. The strategical offensive denotes offensive action generally, both movement and battle, directed to the end of defeating the enemy. The tactical offensive implies only the act of attacking on a given field, and may thus be said to be the crowning act of the strategical attack. Strategical defence consists in a general defensive attitude, whereas tactical defensive means resistance to attack in a position selected. Though the nature of the case may not justify the distinction, yet it is often convenient to use the names, in order to indicate concisely which special act of attack or defence is referred to.

A modern writer has rightly pointed out that the historical offensive must precede the strategical, and the same applies to the defensive. The latter will in most cases proceed from a generally passive, the former from the naturally aggressive character of a nation.

If, then, the historical element is the starting-point, its military concomitant is already something more tangible. No one marvelled that the Turks, in 1877, adopted a defensive attitude from the first. No one certainly ever thought

for a moment of strategical motives, but accepted the fact as something quite natural, because Turkey had entered upon a stage of historical development in which the defensive was alone possible; whilst Russia, impelled forcibly by the idea of Panslavism, was naturally bound to attack. Thus, even before the war, the historical standpoint dictates to the belligerent the manner in which he is to conduct it. States, offensive by both historical tradition and political predilection, seek the objects of their aim beyond their own frontiers, and must accordingly act on the offensive. The State that has arrived at a state of self-sufficiency naturally acts on the defensive.

Exceptions are possible. Flaws in the military system may compel a Power, ordinarily aggressive, to act temporarily on the defensive. States continually striving to enlarge the scope of their ambition are bound to pass through epochs, in which they will see themselves confronted by a combination of opponents, and are obliged to confine themselves to the defensive. Rome has experienced such times, and so has Prussia.

The case in which both parties take the offensive is only conceivable in the event of a war between two States of equal power and which have the same military organisation. A difference of a few days in the mobilisation, in these modern times, forces upon the defaulting party the necessity of an initial defensive.

Napoleon I., by his bold and rapid aggressive wars, established the claim of the offensive to undoubted preference. The improvements in firearms of all kinds made since then at present tends to make the opposite appear correct from a tactical point of view. Since a strategical offensive, as we shall demonstrate later, is only practicable in conjunction with a tactical offensive, the disadvantage inherent in the latter would naturally make its effect felt in the strategical domain also.

According to this, the party upon the defensive by force of circumstances, *i.e.*, the passive party, should at once be in a

position of advantage. This is a veiled contradiction, which shows that the idea of the greater strength of the defensive is, in spite of all that may be said, based on illusion.

True, that, with his improved arms of precision, the defender is able to make a clean sweep of the field within a zone of a thousand metres. A broad deadly belt, ten times as deep as in former days of the smooth-bore muskets, must be passed by the attacker. The defender profits by any protection that the ground, buildings, and artificial means of defence may afford, he is collected and prepared to meet the attack. His own fire may be vomited forth without interruption, whilst the attacker must often cease firing, in order to move forward under the most trying circumstances, and, besides facing loss and danger, he must also bear extreme fatigue. In the defence things are simpler. The command can remain entirely in the hands of the supreme authorities; within the army, the scope of independent commanders will be greatly circumscribed. The supply of ammunition to the troops and the bringing up of available reserves will be easier, as only a definite line is held, and the troops are not dispersed in advancing, and mixed up; directions are not changed, and action is not suspended in one place and resumed with redoubled vigour in another, as is bound to happen in every attack.

Besides tactical advantages, the defensive is sure of some few other points in its favour. The commissariat, the bringing up of reserves of men and horses, and of supplies of all sorts, is less uncertain, because the army is close to its magazines and depots, frequently even returns in the direction of them, and the lines of communication are not, as in the case of the offensive, continuously lengthening. In the case of the defensive, additional strength is put forth, in so far as the defender can employ many troops, which the attacker is not able to bring into the field. On the side of the defender, the garrisons of fortresses, which are within the theatre of war, are of real service, as they draw upon themselves part of the forces of the enemy, be it only to observe them. The

attacker cannot bring his own fortress-garrisons into the field, because he dare not leave these places entirely unguarded, and must also bear in mind the possibility of a repulse. Besides, garrison troops are mostly unsuited for active service in the enemy's country. The defender can employ forces of this type in covered hilly country or in fortified positions. He is even aided by popular levies, which are not available for the purposes of the attacker. The citizen and peasant of advanced years may take up arms to defend their own hearths, but not to assist an army to extend its conquests in an enemy's country.

It is quite correct to say that the attacker must expect to suffer more losses and undergo the greater exertion. He labours under a great disadvantage in that his absolute strength dwindles in the course of events to a much higher degree than that of his opponent, the defender.

The attacker first enters the enemy's country and must occupy it. He must penetrate a more or less complicated system of frontier fortifications, must besiege a number of them, or must permanently watch them. Both entail expenditure of forces. As he advances, his lines of communication are lengthened and become less favourable to his purposes. Day by day the army needs more small garrisons in its rear, in order to keep open communication with the base, and the bringing up of reinforcements becomes increasingly difficult. Armies acting on the offensive melt like fresh snow in spring. The frontier is passed with hundreds of thousands, and after the lapse of a few months in the heart of the enemy's country the war is carried on with only a matter of thousands. Napoleon, who, in October 1805, appeared on the theatre of war in Germany with 200,000 men, was not able, in spite of his excellent system of economising strength, to collect more than 80,000 on December 2nd for the decisive struggle at Austerlitz. More startling still was the melting away of his forces on the victorious advance during his campaign in Russia. He crossed the Niemen at the end of June 1812 with 363,000 men, and when he arrived in Moscow in

the middle of September, he had no more than 95,000 with him.

And then, again, it will be difficult for the attacker to keep alive the original enthusiasm. The object seems attained after the first battles, and the advantage won. The necessity of putting forth continually fresh strength and resources in order to harvest fresh fruits, and to retain what has been won, is a difficult matter to explain to those called upon to bear the burthen. The defender is in quite a different position. As the enemy presses forward and keeps coming nearer, and the danger becomes more apparent, new sources are opened to him. Exceptional measures, in order to obtain recruits, arms, and money, need no justification. Initial reverses—when a proud and strong nation is behind the army—may be a very source of strength to the defence. The Northern States, during the great rebellion, and France, in the second half of the late war, furnish remarkable instances.

To counterbalance, however, all these disadvantages, the attack possesses, in a much higher degree than the defence, the capacity of exciting to action all the intellectual and moral forces of an army. This qualification explains how it happens that the former scores the greater number of final successes. The attacker proceeds from the first in clearer consciousness of the object in view. He chooses a certain aim, and his intellectual forces are thus guided into a definite groove. His intellect becomes productive as if by force of circumstances. Much is gained by the mere fact that the attack incites greater energy than the defence; for of two opponents equal in other respects, the more active will be the victor.

The defender awaits the blow in order to parry it. He must observe the enemy, and order his own action by that of the other. It is impossible for him to feel the same stimulating impulse as the enemy, who thereby becomes the controlling factor. The consciousness of this fact will speedily and surely pervade the masses, and work wonders.

The bearing of an army which is pressing forward is vastly different from that of a retreating or even of a waiting army. The spirit of enterprise is aroused, and the attack gives it a scope quite different from that of the defence. The former sets a much greater number of active factors in motion. We know already that the commander-in-chief only lays down general directions. The inferior commanders are called upon to follow independently the lead given them, and to exploit the occasion. *Any one of them, even the most junior, may become the chief factor in the drama, if chance should place him on the decisive spot.* A line of defence a few miles in length may in general be admirably chosen, and yet have a weak point, and the honour of the day will surely fall to him who assails this point with all his might. The sense of this possibility confers on the attacking army the advantage of greater dash. With the number of co-operating forces, the number of chances of success is also increased. A point, where the defenders' line has been pierced, acts as a magnet for all the parts of the attacking army not otherwise engaged. Just as waters rush towards a break in a dam to widen the opening, so here the waves of combatants throng to the spot where a bold stroke has made the first breach. Success in attack has, moreover, a double signification. *A successful defence merely proves that the enemy was at the moment not the stronger party, but the successful attack proves conclusively that the attacker is actually the stronger.*

Psychological elements are of equal influence in war as material ones. If we figure to ourselves a situation in which danger is apprehended, without our knowing when it will occur, we shall also understand the position of an army acting on the defensive, while awaiting the onslaught of the enemy. The defensive lacks the elements of impulsion. It fetters its forces instead of fostering them ; it is apt to force upon the soldier the feeling that the army and its commanders are controlled by the situation, instead of controlling it. And this feeling is not dispelled in the absence of a sufficiency of energetic action. In every defence the consciousness that

the issue can only be considered happy if the whole line can be successfully held is disquieting. It is of no avail to succeed in holding five-sixths of it, if the enemy crushes the sixth part. It is even quite sufficient for him only to gain a flank, whence he can roll up the whole line. On August 18, 1870, the issue was finally decided by only a few battalions, which gained the right flank of the enemy (who had held a front some miles in extent till evening), and in conjunction with the troops engaged in the frontal attack, succeeded in destroying a small portion of the French right. *It is a fateful difference, that the defender is only victorious when he wins at all points, while the attacker triumphs if he gains the upper hand in a single spot.*

This truth, which declares against the much-vaunted tactical defensive more than against the strategical, explains also the reason why the defence of rivers and chains of hills has hardly ever been successful for any length of time. Neither the Danube nor the Rhine have stopped armies. The very isolation of various bodies of troops placed at probable points of crossing is a danger. But a still greater danger lies in the conviction that every one is lost immediately one of its neighbours retires prematurely. A premium is, so to say, put upon a "seasonable retreat," which tends to weaken the energy of the defence. The poet, who makes generals dispute after a defeat in this wise—"Yours fled first," "No one held his ground, the flight was universal," "No, Sir; it began on your wing!" must have had in mind a defensive battle upon an extended front.

In the defence of the Balkans, in the winter of 1878, at the only point where a brave resistance was made, the defender met with disaster. Jomini calls mountains "insurmountable impediments which, however, are invariably surmounted."

Even though, as Clausewitz opines, the defence *per se* may be the stronger form, and the weaker side may occasionally avail itself of it with advantage, in order, supported by the ground and artificial means of defence, to attain at least the

modest satisfaction of having beaten off the enemy, yet *the greater vitality dwells in the attack.* * The task of the attacker has certainly been rendered more difficult within the last decade. The greatest exertions will be required to decisively crush the masses of troops which the defender will in future bring into the field, and who will await the attacker, possibly in a safe position under the guns of their fortresses, right and left of his path. The commander-in-chief must be more cautious in weighing everything, but also more daring in action than hitherto. Dash alone, or the attempt to turn the enemy's flank, will not suffice in the future. The ground for the battle will probably have to be prepared by preliminary movements combined with an occasional passage at arms designed to deceive the enemy, and by independent artillery engagements on a large scale, under cover of which masses of troops are rapidly shifted from point to point; and, once begun, the battle must be fought to a finish with the greatest daring. Where hitherto five or six army corps have been engaged in the frontal attack, whilst a single one sufficed to operate on the flank of the enemy, this proportion will probably be reversed in the decisive struggles of the future. The next war will doubtlessly bring episodes of the straining of every resource, of which older campaigns cannot convey the faintest idea.

Yet this will alter nothing in the general views respecting attack and defence, for these are based upon internal, not external, motives; upon reasons which spring from the secret of human nature. *All difficulties in his path will awake in the assailant new ideas and new forces, will sharpen his wit and increase his spirit of enterprise; and will thus, although they exact much of him, also make him better returns. Happy the soldier to whom fate assigns the part of assailant.*

* It is to be sincerely deplored, as already pointed out in Rüstow's "Feldherrnkunst des 19 Jahrhunderts," that just the chapter on the attack in Clausewitz's works should have remained in the condition of a mere sketch, since it is open to question if the author would not have altered his views as to superiority of the defence over the attack, if he had had the opportunity of carefully revising the original text.

The object of all war, the crushing of the enemy's forces, can, after all, only be achieved by attack. The partisans of the defensive also always maintain that it can only be assumed for a time, that in the end the defender must also begin to attack, and answer the thrust he has parried by a stroke in return, and that he must ever keep this in view. That is to say, in other words, that the defender would also be attacker, and only awaits the moment when he will be able to take the offensive with prospect of success. This is an acknowledgment that the defence is not entitled to be considered an independent form of war; that it is, after all, only a passing episode. No one would say that a man who has been attacked and has warded off the blows intended for him has been engaging in a brawl. In like manner, it cannot, with reason, be said of the defender that he is waging war; he rather suffers one.

To make war means to attack.

After this general consideration of the subject, we will proceed to explain the conditions for a successful execution of the attack.

It goes without saying that the attack demands the greater expenditure, whether of physical or moral force, or of intelligence. Unless, therefore, the army acting on the offensive is decidedly superior in numbers—both belligerents being equal in other respects—it is absolutely essential that it should possess the inner worth, by which alone extreme strain can be sustained. Inefficient armies, be they ever so great in numbers, are unequal to certain tasks, as, for instance the taking of well-defended localities, which cannot be turned or be taken by stratagem. Such places can only be taken by assault by very brave, clever, and properly trained troops When these are wanting, it is generally of little avail to renew the attack with fresh troops, seeing that each isolated shock is of little weight, and will not break down resistance One vigorous assault will always effect more than ten feeble ones, even though they follow immediately one upon the other. The assaults of the French upon the position on the

Lisaine, on January 15, 16 and 17, 1871, afford ample proof of the validity of this contention.

Since success in attack now depends very much upon the subordinate commanders, it follows that only an army possessing a thoroughly experienced, intelligent, and brave corps of officers, habituated to independent action, can be successful in the offensive. All its members must be endowed with the spirit of enterprise. As the absolute power of the attack is continually being expended from the first moment, it follows that a thoroughly well organised system of reinforcements is one of the necessary conditions of success in the offensive. Reinforcements for the armies must always be in readiness, moreover, reinforcements of the right stamp, capable of fulfillng the arduous tasks of the attack. Hence the idea of the offensive *rôle* rests upon the supposition of an army carefully trained in times of peace, and of a rigid military system supported by public opinion. None but the former can create the requisite impelling force, while only the latter can ensure the uninterrupted supply of the elements required to maintain said force at a constant level.

Rapidity and continuity of action are the elements of the attack. No halt may be thought of before the object has been attained. Any suspension of operations is dangerous on account of the reaction succeeding a period of unwonted activity. It is difficult, during the operations, to resume the offensive once it has been suspended; and to renew an attack in the course of a battle is practically impossible, unless reinforcements arrive and give a greater access of force than is lost during the period of relaxation. Hence the deliberate suspension of an attack is never justified, except by the definite prospect of the arrival of considerable reinforcements. In the face of unassailable positions the most daring attempts at turning them and at intimidating the enemy are better than waiting for a favourable opportunity. Otherwise the attacker will become the attacked; for the courage of the defender must necessarily grow, as

soon as he perceives that the opponent does not dare to attack him. It is, furthermore, in the interest of the attacker not to bring the battle to an issue in the place where the defender has prepared for it. It must be his constant aim to transfer it to other fields—that is, by his own manœuvring to force the defender into movement in a direction tending to favour the attack.

A rapid attack generally entails fewer losses on the whole, although the latter may appear appalling for the time being. Rapidity is an element of particular importance in the tactical offensive. Frederick the Great thus teaches in his *General Principles of War :* "Therefore, the sharper attacks are, the fewer men they will cost."

The gradual flagging of energy in the attack demands, moreover, the greatest economy of fighting material. Hence the attack must have but a single object in view at a time, all others being temporarily disregarded. All available physical and moral forces should be devoted to that one single object. In the tactical offensive it must be clearly understood that everything must be staked upon gaining undisputed mastery at the point designed for the assault, so that the enemy will be absolutely unable to retrieve the situation at that particular point. That being assured, opportunities for lucky strokes elsewhere may be sought. In the case of the strategical offensive, it is necessary to work with singularity of purpose with the one object of destroying those of the enemy's forces, the defeat of which will confer the immediate mastery of the situation.

But the choice of the object in the strategical offensive may yet be regarded from other points of view. It will be incumbent to consider whether it be possible to attain the whole object of the war by a single stroke, or whether it be not better to divide the operations into several successive phases, and thus to engage not merely in one, but in a series of strategical attacks, all, however, tending towards one single grand and final object. The extent of the single strategical move must be carefully calculated, according to

the means at disposal. A wise moderation here is the first virtue of a commander-in-chief. This virtue was lacking in Napoleon in the year 1812, and the deficiency led to his defeat. The continuation of the offensive movement from Smolensk to Moscow, in the second half of August 1812, was a most hazardous enterprise. This last decisive phase of his operations ought to have been the object of another special campaign in the spring of 1813, and the winter should have been given up to making preparations for it. Napoleon over-estimated the strength of his genius, and failed to see the weak point in the constitution of his forces, when he endeavoured to finish the whole business in one single campaign without pause. On the other hand, Alexander, in his conquest of Asia, proved himself a model of moderation, in determining wisely the several phases of his military operations, while keeping in view at the same time the most elaborate plans which a general could hope to carry out. In the systematic conquest of the coast of Asia Minor, and in the occupation of Egypt, before beginning his march into the interior, he manifested his genius in its fullest development. He secured his rear, reinforced his army, acquired formidable forces at sea, and not till then turned his face towards the unknown East. He thus saved himself from Xenophon's fate, and, on this very account, the cunning and prudent Romans called him the only great man among all barbarians. The same discreet moderation was displayed by the German military authorities when, in 1870–71, during the siege of Paris, they stopped the extension of the offensive in the French provinces, in order to subdue the capital first of all, and to make perfectly sure of this success. "The general situation renders it necessary only to continue the pursuit of the enemy after a victory as far as is requisite for the purpose of dispersing the bulk of his troops so as to prevent them from reforming for a space of time. We cannot pursue him into his last stronghold, such as Lille, Havre, and Bourges; we cannot think of the permanent occupation of distant provinces, such as Normandy, Brittany, or the Vendée; *we*

must even be content to evacuate places already captured, such as Dieppe, and eventually Tours also, in order to be able to concentrate our main forces upon a few principal positions." So we read in contemporary letters of guidance from headquarters. Only after Paris had been taken, the besieging army set free, and it had become possible to adequately reinforce the other armies, the complete subjugation of the provinces, if still necessary, was to be taken in hand. Had it not been for this limitation, which was dictated by circumstances, the fighting forces would have been scattered, or, possibly, after brilliant series of successes, a reverse might have been suffered, or even the final success might have been jeopardised. If, then, the offensive must pursue its aim unfalteringly, it must nevertheless not place it at an unattainable distance, but must always moderate the stake in accordance with the means available. *Voluntary restraint is a safeguard against enforced retreat.*

The assailant must not seek the security of his flank and rear in covering them with a considerable part of his forces, but rather by striking in front with the greatest possible vigour. Every detail of troops for secondary purposes constitutes an evil.

The most careful organisation of the lines of communication between the army and the home country will be essential, in order that reinforcements of all kinds, despatched from the latter, may reach the army confronting the enemy without delay. Napoleon was, in this respect, a pattern of foresight. He expended much skill and pains in keeping open the lines of communication with his base of operations in the rear, for he knew full well that an army acting on the offensive is in need of continual access of strength. Even in 1812 he neglected nothing in this respect, though his great precautions did not suffice for surmounting difficulties which were, in fact, insurmountable.

The more magnificent, confident, and self-conscious the attack, the greater will be its chances of success, providing the necessary prudence goes hand in hand with these qualities

Successful assailants have always done half their work by impressing their opponent. In many instances, as in the case of Junot's march to Lisbon in 1807, and Diebitsch's march across the Balkans in 1829, the effect of the offensive lay solely in the moral impression produced. In such situations the conclusion of a favourable peace will generally be reached by a combination of the faintheartedness of the enemy and the aid of an adroit policy, which forthwith exploits the advantage gained in the field.

The defence makes far less demands upon the quality of the army. Especially is this the case in the tactical defensive. In that situation the soldier becomes more of a machine than in the attack, his place being assigned to him, and his *rôle* clearly defined. Good shooting and firmness are the two essential qualities, and these the young inexperienced soldier is capable of developing. Initiative, enterprise, and ready perception are less material ; at least, it is sufficient if a comparatively small proportion of the commanders possess these qualities. Considerable demands are, however, made upon discipline. But this latter can be more easily maintained in the case of the defence than in that of the attack.

Hence armies less efficient and masses which have been rapidly levied for the purposes of war, both of which would be absolutely incapable of an energetic offensive, may still achieve something considerable in the defensive. The difference between the two *rôles* is so considerable, that often the same troops cannot be recognised when they proceed from one to the other.*

The elements of the offensive are rapidity and vigour ; those of the defensive, perseverance and tenacity.

Whilst, accordingly, the former strives to gain its ends by heavy and rapid blows, the latter may rightly depend on the effects of time and on the constant renewal of measures of resistance. Every defence must therefore prepare accordingly from the very beginning. Several successive lines, to

* Vide pp. 143, 144.

be held with all the force at its command, lend it great strength, and a wide expansion of the theatre of war is of advantage to it, as was shown in the campaign of 1812. Whilst, moreover, it has less need of a perfect military organisation and systematic training in times of peace, it requires, on the other hand, a full treasure chest and a solid national credit to enable it to respond to the growing and constantly recurring demands for resources in men and money during a war. And since, again, it seldom happens that a country is capable of furnishing unaided in the time allowed everything of which its armies stand in need, it follows that a State which means to be successful in defensive warfare must have at its back either the open frontiers of friendly powers, or a sea of which it holds command. A country not in this position can at best only resist as long as its own industry is capable of supplying the needs of its army. It must also be remembered that the pecuniary resources of a country are at the same time growing less.*

Whilst the assailant can only profit by the possession of fortresses as *points d'appui* for the organisation of his lines of communication, and as a protection of his magazines and depôts, the defender must derive a much greater advantage from them, make use of them as supports for his wings, and turn them to account in conjunction with the field army, either to defeat the enemy or to weaken him, before he comes up to the latter.

The defender must, moreover, take account of the powerful attraction which his main army exercises upon the attacker. This army holds not only the country behind it, but, as long as it is not defeated, all the surrounding country also. Detachments for the purpose of protecting other districts can also, in great measure, be spared to the side of the defence, as soon as the operations between both armies are in full swing.

As we have already seen, the offensive seeks salvation in

* Vide p. 149.

movement. Hence the defender can only rarely rely upon being attacked where he first takes up his position and prepares for battle. Exceptionally favourable topographical conditions alone can lead to this. The defender must, therefore, think of his own movements and be prepared to transfer his troops rapidly from one point to another. For that reason he must never be tied to a single line of communication, but must be in a position to change it readily. As, however, as a rule, he operates in his own country, and as there exists everywhere a comparatively dense network of railways in the present Western and Central Europe, that will not be a difficult task.

The battle, too, must not be prepared in only one position, but the main features at least of points of support must exist in localities where the attacker may possibly appear, and where the defender must be ready to resist him promptly. Very great regard has been paid to this point in France. The North-East of the country may be regarded as being one well-prepared battlefield. Wherever active armies may meet on this ground, field entrenchments will be seen to arise in a single night between the already existing fortifications from the very beginning of operations.

As the assailant has taken the initiative in movement, the defender is naturally exposed to the danger of arriving at the critical point later than the former. It will thus be necessary for him to impede the movements of the enemy. This may be done by means of counter-attacks, which come upon the opponent in the midst of the execution of his designs. Such operations are, however, always difficult. They demand very exact information of the enemy, and resolute and cool commanders, who do not allow initial successes to carry them too far. The counter-attacks, which naturally have a surprising effect, generally begin favourably; but if the attacker does not lose his head, he will soon penetrate the intention, change his plans, bring up his forces, and at once proceed to a decisive issue. A counter-attack pushed too far may accordingly easily bring on the battle which the attacker has

sought, and which the defender has not intended at the particular point, and for which he is not prepared. In that event the cause of the side acting on the defensive is half lost. Less danger attaches to the attempt to impede the movements of the attacker by taking up positions threatening his flank. Whilst the defender marches with his main body to the spot where he expects the issue to be decided, he can often drop detachments into such flank-positions without risk, and cause them to follow later, before they are seriously attacked.

Thus it follows that the defender can never really allow his *rôle* to consist, in accordance with the theory of the exponents of the defensive, in passively warding off attack alone, but he must rather bring into it an element of movement and battle as well. This active element is, after all, bound to step in, when the assailant, having been repulsed, must be attacked in turn, and be defeated. The longed-for moment for dropping the mask of the defensive and for assuming the offensive, has then arrived.

Some of the main features of the nature and course of attack and defence having now been explained, there remains to consider the combination of both, which in the view of many members of the military profession forms the highest achievement of the art of war.

As the advantages of the offensive are principally seen in rapidity of movement, those of the defensive in fighting, it has been held to be best to combine the strategical offensive with the tactical defensive. According to this theory it would be necessary to advance against the enemy into his territory against positions which he dare not allow to be torn from him, and thus force him to fight, but remaining on the defensive during the ensuing battle and assigning to him the more difficult and damaging part of assailant. *Offensive movements* and *defensive battles*, a capital idea, indeed, but one very difficult to realise, and scarcely ever to be met with in military history.

From what we have already said upon the subject of the

strategical concentration,* it follows that, in these days, it will not be possible, after concentrating the armies, to make any considerable advance without meeting with resistance on the part of the enemy. Hence offensive movements will entail immediate offensive action, and it cannot possibly be otherwise once capital points have been reached. If the army acting on the offensive should then wish to go over to the defensive, and allow itself to be attacked, it would restore to the enemy the strategical liberty of which it had only just deprived him with so much toil, and thus sacrifice its own advantage. The sudden transition from offensive to defensive might, moreover, not be without prejudicial influence upon the troops. But above all, we must remember that the commander-in-chief is never so entirely master of the form and time of the decision that he can determine it at will. In the same way as engagements, so the battle also will be the immediate result of movements. Hence it is quite natural, that armies on the advance should attack whenever they meet the enemy. The fighting, moreover, exercises its attractive force upon all troops; it is generally no longer possible to prescribe them a defensive attitude.

The *strategical* offensive involves accordingly, in a perfectly natural manner, the *tactical* also. The former is inconceivable without the latter. It is the tactical attack that first accentuates the strategical, completes it and renders it fruitful. Strategy sows the seed, tactics reap the harvest. Any opponent, even the feeblest, who is strategically driven into a corner, will appeal to the fortune of arms upon the field, before declaring himself vanquished. If the attacker were to stop here, in order in this last crisis to enjoy the advantages of the defence, it would be very frequently tantamount to renouncing his chance of a definite solution; for the enemy, who, up to then, has played the part of expectant defender, will also remain so at the last hour; and that the more readily, since his prospects are not, as a rule, improved by a contrary course.

* Vide pp. 169, *et seq.*

Situations may arise when despair and compulsion, which he cannot escape, force the defender to take the tactical offensive, and when the enemy, who has till then acted on the offensive, is compelled to adopt the defensive. This will be the case, for instance, when the defender has been driven back by the attacker into a great fortress, and necessity compels him to endeavour to free himself. The attacker, who is investing him, becomes at this moment changed into a defender, one even who is able to prepare his defence. This is what happened to the Germans before Metz and Paris. The saving of an object of great political importance may also compel the strategical defence to change *rôles*, and thus give the offensive the occasion for a tactical defensive. When, in the winter of 1870–71, the fall of the French capital, and with it the cessation of resistance throughout the whole of France, was impending, the Germans had occasion to fight against the enemy's troops coming to raise the siege. But in this case it was seen particularly clearly to what extent an army that has for a long time advanced in successful attack lies under the spell of the spirit of the offensive. Even under these circumstances, our armies fought their battles almost everywhere as assailants, and only confined themselves to the defensive, where necessity rendered it imperative. *The strategical and the tactical offensive are inseparable.*

It is similar with the strategical and tactical defensive. Whoever has observed a defensive attitude in his movements will generally keep to it on the battlefield also. The attacker, who passes from offensive manœuvres into action, presses him sorely. It then becomes exceedingly difficult for the defender to seize the moment for shaking off the yoke imposed on him, in order, in his turn, to play hammer, and to cease being the anvil. Here it is seen what it imports when one party has learnt to consider itself inferior to another. Even with superior numbers on its side, it will often remain on the defensive, and be glad if it can remain so without undue disadvantage. The French at Vionville on

August 16, 1870, supply us with an instance of this. For sixteen days they had been on the strategical defensive, had been attacked on the 6th and 14th of August, and accordingly felt themselves in the new battle shackled to their former condition, in spite of the fact that they had overwhelming numbers on their side. An army capable of a sudden change from the defensive to the offensive, will never allow itself to be forced into the defensive, but will play the part of assailant from the first. Now, it is contended by some, that this abrupt change should take place on the battlefield, where the programme of the defensive having been carried out according to rule, and the enemy having been successfully repulsed, a counter-attack forms the finale. Moreau at Hohenlinden, Bülow at Dennewitz, Napoleon at Dresden and Austerlitz, have all proved that a transition from defence to attack upon the battle-field is possible.* Yet these instances dwindle before the number of those of an opposite character.

Where originally the defence is due to the force of necessity, the army will usually remain on the defensive. If the enemy's attack has been repulsed, all doubt as to whether he will not again return with renewed strength and energy, or whether his repulse was final and complete, is not by any means completely dispelled. In most cases hesitation will be felt to compromise a success gained by a premature offensive. The defender will be content to maintain his position, so as not to lose what he surely holds, and he will readily abandon all idea of adding to his successes, because of the one safely in his hands. Again, it is never at the moment felt to be quite certain that the attacker has renounced further effort. This becomes apparent only by degrees, often not until the next morning, when a field of battle which has been successfully contested is found, to the general astonish-

* At Dennewitz the defender, however, had only to await the moment when his forces should all be assembled in order to enable him to adopt the offensive ; at Austerlitz the defensive was really only a pretence, the attack had from the first been determined upon.

ment, to be evacuated by the enemy. In these days of great distances it is most difficult to recognise the turning points in the progress of battles.* Thus the defensive will not, as a rule, be transformed on the battlefield into the offensive, unless considerable reinforcements are brought up to one's own front or flanks, or, as was the case at Waterloo and Königgratz, upon the enemy's flank.

Before the strategical defensive changes to the offensive, a pause takes place. The original attacker is crippled and cannot go on. The defender has got rid of the feeling of being mastered, is strengthened in moral and physical respect, and the change of *rôle* is thus gradually brought about, long before it is actually announced, to the surprise of the observer not on the spot. Napoleon's *Grande Armée* practically perished on the advance into Russia, but the destruction only became apparent when the remnants of it began the retreat and the Russians set out in pursuit.

8. *Dispersion, Concentration, and Manœuvring*

"Every close concentration of great masses is an evil in itself. It is justified and imperative when it leads immediately to battle. It is dangerous, when in the presence of the enemy, to break up from it; and impossible to remain in it for any length of time.

"The most difficult task of all good leadership consists in keeping masses of troops separated, but without surrendering the power of concentrating them at the right moment.

"For this, no general rules can be laid down; the problem will vary on each occasion."

We place the leading principle governing the subject of this chapter at its head, but do not attempt to expound it, since it must be demonstrated by experience. As soon as it

* How difficult it is, in the face of an energetic attack, for the defender, even with superiority of numbers on his side, to find the right moment for counter-strokes, was shown by the Silesian army at Laon. In spite of the successful surprise by York and Kleist of the right wing of the French at Athies on the night of March 9 and 10, 1814, a general offensive, which would have annihilated Napoleon, was not resorted to on the 10th.

be denied that the crowding together of considerable masses is an evil, much that can be said about dispersion and concentration loses its force. One, however, who has been engaged in war knows how oppressive the crowding together of troops is felt to be, and how every one breathes again as soon as the masses are separated, and how each and every troop longs to be released from the close bond, so as to be able to move freely. We do not take into account fatalities such as infectious diseases, which, of course, spread more rapidly among closely-combined than among widely-separated crowds, but only refer to ordinary evils, such as the want of space for quarters, the bivouacking in the open, the rapid consumption of all the resources of the country, want of water,* the non-arrival of supplies, the impossibility of conveying sick and wounded upon the crowded roads, the deterioration of the roads in bad weather, the confusion of and friction between, columns on the march, the picture of desolation which is spread when hundreds of thousands, like a swarm of locusts, pass over a district. The atmosphere is full of dust, smoke, and smells of burning. Those in the lead may find it still bearable. If, however, the passage of troops extends over two, three, or four consecutive days, the hindmost march through a mere wilderness. That is certainly sufficient to justify us in describing the massing of troops as an emergency measure.

"First of all, every army must live; it must eat, drink, rest, and have room to move." That is only possible when scattered. There are more towns, more wealth, and more railways and roads to and fro within an area of large extent than in a narrow space. The state of dispersion must accordingly be maintained as long as possible. A condition of concentration, with its train of discomforts, must be reckoned from the time when that amount of space can no longer be allowed to the army corps which, in the chapter on marches, we held to be necessary for moderate comfort.† The columns

* This was very keenly felt in the neighbourhood of Metz in 1870.

† Vide p. 249.

should not be concentrated till the enemy is approached. The essential thing here is not to allow oneself to be deceived, and not to miscalculate. The solution of the problem depends only upon ordinary factors, viz. time, space, depth of march, and the marching capacity of the troops. Simple, however, as it looks, it is often rendered extremely hard by the fact that moral factors, rapid decision, perspicuity, firmness of conviction devoid of obstinacy, and energy in command and in action also come into play.

If during the movement a battle is seen to be inevitable, it will be necessary to bring up the long marching columns to the front, which must halt for this purpose. In such a case we speak of the deployment of troops to the front. But the divisions marching on parallel roads are also brought in. This is called the concentration of the armies. Before impending great decisive engagements with the enemy, a gradual concentration will be effected during the few days preceding the action. The deployment can be effected on the last day, if only one army corps is marching on every main road, or the two or three last days if two or three corps are marching on the same road one behind the other.

An army corps on the march without wagon-trains requires roundly six hours for deployment to the front. If its train is to follow it, double the time is requisite. The head must, in that case, remain stationary ; if it is obliged to move, the exertions of the hindmost troops are apt to be increased beyond all measure.

It frequently happens that after a certain distance has been covered the enemy is fallen in with, and it becomes necessary to deploy. If the distance already covered was nine miles, the last battalion of the army corps will have marched over twenty-three miles before arriving upon the field of battle. An enemy, who in the early morning is more than fourteen miles distant, and who does not also advance, cannot well be attacked the same day. It must then suffice to bring the head close up to his position, the deployment and the attack being deferred till the following day. The attack

may certainly be begun when only a part of the troops have closed to the front and deployed, leaving the remainder to come up during the action. As, however, this entails the impossibility of united action, it is a disadvantage. Reversely, this situation allows of the enemy being eluded, when more than fourteen miles intervene between him and the troops on the march. If, on the preceding night, his head was nine miles distant, it would only be necessary to retire nine miles, in order to avoid any serious engagement for that day. The foremost troops of the army corps of the enemy would have to march eighteen, and the hindmost as much as thirty-two, miles before reaching our position thus shifted back. But soldiers who have marched thirty miles are no longer to be feared, since they have exhausted their strength. The march would, besides, last so long that night would intervene, unless the attacker started before daybreak, and thus imposed a double exertion upon himself. In winter, when the roads are bad, the snow is deep, and darkness sets in early, a far shorter distance is sufficient to render it impossible for the enemy to undertake a vigorous attack.

But in order that this calculation may prove correct in practice it is necessary that one shall be able to move back with facility from the place in which one stood in the morning. It is necessary either to have a number of roads at disposal, or to be able to retire with the troops in broad formation. Their strength, too, enters into the question. Given an army corps, deployed, which is required to retire upon a single road, it needs for this purpose five to six hours,* the same as for deploying. If the enemy was a day's march distant, and he begins his advance simultaneously, the heads of his advancing columns fall in with our last detachment at the very moment of its quitting its original position, and it will scarcely escape without a brush. If, however, the baggage were behind our army corps, and must first of all be

* Colonel Blume reckons five hours for a march of fourteen miles, including the filing of an army corps into a single marching column. ("Strategie," p. 48).

set in motion upon the line of retreat, the whole army corps will be caught; for, as the baggage-train occupies a length of road equal to a day's march, the army corps will still be waiting on the spot when the enemy arrives.

However, data of this kind must not be taken to apply with mathematical exactness.* It is seldom that army corps are quite up to their full strength, and only in exceptional cases is an army corps tied strictly to a single road, unless it were compelled to pass a long defile, an embankment, or a pass. These examples will, however, make plain the points to be considered in the calculation of movements in advance or to the rear. They teach us that army corps cannot be moved about like men on a draught-board, but that, in addition to the time and space which each part must occupy in order to pass from one place to another, the time which the whole requires in order either to close up before the battle, or in order to file into a marching column, must be taken into consideration. It is also to be remembered that a certain attractive force, as that between a magnet and iron, comes into play between two large hostile bodies approaching each other. As one army corps is able to disturb the retreat of another which stands opposed to it at a distance of a day's march or less, and as the latter must therefore prepare for defence, it follows, as a general rule, *that large masses of hostile troops, which have approached each other to within such a distance, do not generally separate without a fight.* In such case an engagement must be anticipated from the first. Only where both armies are echeloned along the road in full marching depth, so that on the following morning all troops of the retiring side can fall in simultaneously, the latter will not be caught up, and an engagement thus avoided.

By reason of the considerable marching depth of an army corps, it is well known that two corps marching one behind the other upon the same road cannot possibly be both deployed to the front on a single day.† If fighting commences

* Vide p. 38 (note).

† Vide p. 37.

at the head of the first army corps, the hindmost troops of the second corps must make at least a good two days' march * before arriving upon the battlefield. It is much easier to bring up two corps marching upon parallel roads, even though these roads lie as much as about thirteen miles apart; for, a simple calculation shows us that the last soldier of either army corps must at most cover between eighteen and twenty-two miles in order to enter the action which has commenced at the head of one of the corps. Similarly, even if three army corps advance upon three parallel roads, each of which is some thirteen miles distant from the next, they would still be able to deploy in line with the head of the centre column in a single day. If, however, the deployment is to be on one of the flank corps, two days would be necessary. If all three corps were made to follow each other upon one of those roads, they would require three days in order to deploy to the front.† General Benedek would have even required four days for his great column in 1866.‡ The concentration of several corps at a given spot can, of course, be greatly facilitated by despatching them upon converging roads. An army extended in the morning along a line of twenty-seven miles can concentrate the same day upon a battlefield situate thirteen miles in front of the centre, provided only the corps are all in close village quarters or bivouacs, and each has a separate road to the battlefield. The soldier farthest away would, as a simple geometrical figure will demonstrate, have only between eighteen and twenty-two miles to march; an achievement which can be demanded of him when the cannons call. The concentration naturally becomes simplified, if the army in the early morning

* We are taking here the army corps without its entire baggage train, for the greater part of it can be temporarily dispensed with.

† The difficulties in handling troops, arising from the great depth of the marching columns need all the more attention and thorough consideration in war games, staff tours, &c., as the full extent of these difficulties is not brought out in the peace manœurves, when not only the wagon parks, but also the regimental vehicles are wanting, and the corps are only at half war strength.

‡ Vide p. 155.

does not form a straight line, but occupies the arc of a circle round the battlefield. The eve of the battle of Königgrätz presents us with a clear picture of this situation.

On June 30, 1866, in the evening, the two Prussian armies, which had separately advanced into Bohemia, stood at Gitschin and on the Upper Elbe, from Arnau away to Gradlitz; only a good day's march from each other. As the Austrians on the evening of the same day began their retreat upon Königgrätz, the concentration of our armies at one point would have been possible. But this course was voluntarily abandoned, and the armies were only drawn a little closer together, so that, on the 2nd July, they remained drawn up in a curve of some twenty miles, extending from Simidar through Miletin and Königinhof to Gradlitz, round the enemy, who was formed up in close formation behind the Bistritz, north-west of Königgrätz. That it was possible from this position to rendezvous at the right time on the battlefield of Königgrätz was brilliantly shown on the 3rd July. Scharnhorst's doctrine, which, in his own day, sounded quite heretical, never to concentrate in position, but always to fight concentrated, was in this case rightly appreciated and executed in a masterly manner. If all the corps of the Prussian army had been concentrated at or about Miletin and Horsitz, far fewer roads would have been found to lead from this narrow space against the enemy. We should have been compelled to let the corps follow each other on the morning of the 3rd July, and the advantage of the more compact concentration, viz. the possible employment of all the combined forces, would have been lost. A portion would never have reached the battle-field, on account of the undue depth of the reduced number of marching columns. *Great masses of troops can more easily be concentrated by closing to the centre than by closing to the front; but the best method is to march the several components on an adequate front by roads which converge upon the goal to be reached.*

This brings us to the subject of *manœuvring*, but before going further, something must be said as to the meaning of

the word *manœuvre*. The times are gone by when Massenbach thought to force the enemy to retreat by skilful manœuvring. We hold, with Clausewitz, that generals who would be victorious without shedding blood are not worth a thought. What vigorous enemy would allow himself to be intimidated by threats? Mere manœuvring on the part of an enemy, without striking a blow, would make upon us the same impression as the mimicry of stage heroes. In spite of their furious gestures we tremble for no one's life, since we know that their swords are blunt. Massenbach, in toasting Prince Henry, the brother of the Great Frederick, imagined that he was raising an imperishable monument to his hero by using the following words: "By bold marches he flattered fortune; more fortunate than Cæsar at Dyrrhachium, greater than Condé at Rocroi, like the immortal Berwick, he gained victory without battle." To our ears this phrase sounds very dubious praise. Victories gained without a battle are only of value with an intimidated, weak enemy. We, accordingly, understand by manœuvres not "scientific" and not even "bold" marches, but always a combination of movements, ever intent upon launching superior numbers against the enemy at given points, in order to crush him. Every manœuvre must lead to battle to one's own advantage. Thus the word loses its guileless meaning.

The fact that troops can be more easily combined by deployment from parallel columns than by frontal deployment leads us at once to a consideration of enveloping movements. These operations owe the high reputation which they have acquired in modern warfare to the circumstance that it was always the side which was superior from the first that resorted to them. The overlapping of the enemy's line upon the wings by one's own superior forces gave an immediate inducement; or a sense of superiority, arising from the excellence of both commanders and troops, enabled one of the belligerents to resort to a wider extension. The weaker will naturally keep his masses closer together, and will avoid the separation necessitated by an enveloping movement.

The greatest advantage of all turning movements is that, if they succeed, they finally result in the whole of the enemy's army, or a part of it, being caught between two fires. Scharnhorst expressed himself to the effect that "troops attacked upon more than one side may be regarded as defeated." This pronouncement is not true unconditionally, yet it is founded upon the fact that he who finds himself between several enemies threatening him from different directions, is constrained to eccentric action which tends to split up his forces, and thus to weaken him, whilst the former work concentrically and gain in strength.

The further advantages of outflanking operations with separate and independent bodies of troops lie in the extent of elbow-room afforded. First of all, the forces can more easily be got ready, and distinct groups can be formed at once. More railways run to two or three places than to one, and subsequent movement is facilitated by the possibility of using a greater number of roads. More villages and increased local resources will provide more liberally in respect of food and quarters. The concentration, also, when nearing the point towards which the advance is being directed, is more quickly effected. The menace to the enemy's line of communications by turning movements may have a powerful effect upon the opponent. The prospect that, in case of a disaster, he may be cut off from his lines of retreat or his means of subsistence at one and the same time, must tend to unsettle him.

When it is impossible to outflank both wings of the enemy, the most vulnerable one must be attempted. The general circumstances of the case will indicate whether it be on the right or on the left wing where success may be counted upon. Under certain circumstances the simple turning of a flank will be sufficient to cause the enemy to abandon his plans and evacuate his positions. But a simple menace by the direction of a movement will rarely have sufficient effect, unless a valuable object is at the same time seriously endangered. The turning of the Prussian army massed on

the Saale, in October 1806, made a disastrous impression, because the great depôt of Naumburg, which lay in the rear of the army, was thus unexpectedly lost. The news spread everywhere, the significance of the loss was apparent to every one, and thus the pernicious impression was created that the army was already defeated before the decisive battle had begun.

The turning of both wings will, when carried out in force, never miss its effect. It threatens the enemy with complete isolation and loss of freedom. In the background appears the hideous spectre of an enveloping battle and surrender. But, as a rule, the positive danger of such a situation is over-estimated; yet imaginary evils, owing to their influence upon the *moral*, often become real ones in war.

The principal objection to all enveloping movements is that which is true of all operations undertaken by divided and separate corps for the attainment of single objects, namely, that the enemy may avail himself of the temporary separation to defeat the several bodies before they are combined for the achievement of their final object.

This danger certainly does exist, but it is moderated to a great extent by attendant circumstances. The first of such circumstances is the clearness of the whole movement. The object is situated centrally, visible to all. All the commanders of the separate divisions of the army know that they can only contribute to the success of the whole enterprise by a steady advance. By this means uniformity of action is guaranteed, and a mistake is not well possible. When Prince Frederick Charles initiated his turning movement against the army of General Chanzy, at Le Mans, he simply assigned, on January 6, 1871, to each corps the road upon which it was to advance. Soon the enemy approached, and the several columns had to fight, without being able to give each other direct support. Orders were, however, issued on January 8 for an unhesitating continuance of the advance. "In all the movements ordered, the main point to observe is: that the quicker and the more decisively the several columns gain

ground towards Le Mans, the greater will be the embarrassment of the isolated divisions of the enemy still interposing between our own columns." Thus ran the concluding paragraph of the order. It is in the nature of concentric outflanking operations, that every column by its own progress favours that of the rest, and the nearer they come together, the more effective, of course, will be the mutual support rendered. This latter will eventually merge in joint and common action upon the same battlefield.

In order to ensure a successful issue, the choice of an appropriate objective is indispensable, in which due regard must be paid to the network of roads, so that all the corps may naturally be led to a common rendezvous by the direction of the main roads. If the objective of the operations is a large town, as was the case at Le Mans, that will, generally speaking, be the case ; for populous places form centres upon which all main roads converge. A simple plan, suitable to the circumstances of the case, is an earnest that the subordinate commanders will act to the purpose, even in the absence of orders from the supreme authorities. This is an important point in view of the difficulties of communication between the general in command and the various columns of the army. The rendezvous arranged must not lie too far into the country occupied by the enemy, otherwise the risk is run of meeting the enemy with his combined forces before reaching the objective.

When, on July 22, 1866, the Prussian military authorities ordered the invasion of Bohemia, they fixed the vicinity of Gitschin * for the rendezvous of the three armies, posted at Dresden, Görlitz, and Neisse respectively, and occupying between them one hundred and eighty miles. Field-marshal Benedek was advancing with his whole army in a compact body from Moravia to the Upper Elbe, in order to throw himself between those single and divided masses, so as to defeat them in detail. Yet the boldly planned junction was effected.

* Vide p. 108.

But this movement, as well as the concentration preceding it, were sharply criticised nevertheless.* A writer of Jomini's school said: "The opening of the campaign displays, on the part of the Prussians, a reckless disregard of every principle of warfare." Another vehemently asserts: "Prussia marched, without the slightest occasion, to the brink of a precipice; and a single blow delivered by the enemy would have sufficed to hurl it into the abyss. This blow was never given. It was only by a miracle that Prussia was saved from defeat, which, under the circumstances, might have become a terrible catastrophe."

Similar stuff appeared in the French military papers even after the war of 1870. But if the facts of the case be more narrowly examined, the impression of a reckless hazard, which the Prussian military movements may have raised in the minds of the uninitiated, disappears completely. The Austrians, before they advanced, were posted between the towns of Weisskirchen, Wildenschwert, Gross-Meseritsch and Lundenburg, in Moravia. Nine or ten days are required for closing up within this space. In case, which was actually the fact, the place of rendezvous were removed to the Upper Elbe, this space of time would be increased to thirteen days. Starting on June 18, the whole Austrian army could not arrive upon the Upper Elbe before the 30th. From Dresden and Neisse to Gitschin the Prussians would have, at most, eight marches to perform. They also could thus complete their concentration by the 30th. Until this date, only detached Austrian corps could possibly confront them, not the whole Austrian army. But the Prussian armies, 125,000 and 140,000 strong respectively, though as yet separated, were each superior to parts of the Austrian army. "This was, therefore, no random venture." The guarantee for the successful issue lay in the proper choice of the objective, which could be reached before the main body of the enemy. "It is true that the position of the Austrian army was not

* Vide p. 182.

then as clearly known, as it is now; it was supposed—but erroneously—that a great part of it would be met with in Northern Bohemia; great difficulties might be encountered in the nature of the ground; but *he who would always in war be on the safe side, will hardly ever attain his object.*" *

The period of danger is, as a rule, confined to a few days, such as those on which the detached columns are not at a sufficient distance to enable them, without prejudice to the whole, to elude an enemy superior in numbers, but at the same time not sufficiently *near* to each other to render mutual support.

If one of the columns be defeated, it does not, on that account, vanish from the scene of action. Our modern weapons of precision and methods of fighting render rapid and complete defeats, such as Olsuwief's, on February 10, 1814, when Napoleon threw himself between the single divisions of the Silesian army, a rare occurrence. The column which has met with disaster can again follow the victorious enemy, when the latter relaxes his grip and prepares to attack another, and thus it can always still facilitate the advance of the others.

Extensive operations certainly presuppose uniformly good generalship in the case of all the detached portions of the army. The scope of the commander-in-chief is restricted to pointing out the object to be attained and general guiding principles. In all other respects he must trust to the judgment and energy of the several subordinate generals, who should naturally enjoy a large measure of independent authority. It is not, therefore, every army which is capable of carrying out successful outflanking and concentric operations.

The most effectual reply on the part of the defender to turning movements always consists in fighting, which summons the combatants on both sides to the spot. Manœuvring ceases, the forces are deployed for battle, and if the *tactical* envelopment be successfully eluded, the *strategical*,

* "Militair Wochenblatt," 1867, No. 18.

as a rule, ends with it. A good illustration of this is supplied by the operations shortly before and after the battle of Jena and Auerstädt. Napoleon had completely surrounded the Prussians and Saxons, who were posted behind the Saale, near Jena and Weimar. On October 12, 1806, his cavalry occupied Naumburg; on the 13th, Marshal Davoust, with a whole army corps, was stationed there and at Kösen. The road to the Elbe, the direct communication with the Prussian capital and the heart of the monarchy, was closed. Only on that same day the last doubts were removed as to the whole Prussian forces still being behind the Saale. Napoleon at once made all preparations for the battle he had sought. Davoust's corps could not be dispensed with, and accordingly it received orders, whilst the main French army was directed against the front of the Prussians at Jena and Dornburg, to make a sweep from Kösen to the west, and attack their rear. Under these conditions the double battle of October 14 was fought. The turning movement had its desired effect in so far as it spread confusion in the Prussian ranks. But it ceased as soon as the battle commenced.

Marshal Davoust had been obliged to forfeit the start gained in the direction towards the Elbe. The French arms did not pursue the Prussians on the evening of the battle much beyond the battlefield; the latter marched throughout the whole night. Even though they were at first unfortunate in their choice of roads, they were able to change them on the next day. Clausewitz has proved in an excellent treatise, that on October 15 and 16 the march to Wittenberg and Dessau would still have been possible, and that the road to Berlin remained open.* The presence of mind required to profit by the fact was, however, absent. The case is rare where an army is outflanked by the enemy's centre, and when the presence of additional corps, further afield on the sides, must be suspected. In that case, however, an action will not

* The measures taken by the French might certainly have been different to what they were. Reaction after the exertions preceding the double battle were making themselves felt in their case also.

put an end to an envelopment, though frequently a resolute stand will suffice. When, after their defeat on August 6. 1870, the French began their retreat from the frontier, the main army, retiring upon Metz, was outflanked by the advance of the Second German Army upon Pont-à-Mousson and the Third upon Nancy, followed by the First Army, But it halted on the French Nied. German cavalry patrols discovered it there on the evening of August 10, ready to accept battle. The actual effect of this manœuvre was but small, because the position on the Wied was abandoned on the 11th, and the retreat continued; and, this, moreover, was made known to the Germans by their scouts on the 12th.

Meanwhile, however, the first preparations had been made for wheeling the Second Army into the line Faulquemont-Verny. By perseverance the French could have escaped from the toils of the grand turning operation. Cavalry and the advance-guards of the Second Army would probably have continued their advance westwards, but in continuing the retreat a way could have been cut through these. In high quarters the question had already been raised of summoning part of the Third German Army. Had the engagements before Metz proved more serious than was expected, the outflanking operations of this army would have been suspended. The instance is all the more instructive, as the outflanking was, in the case before us, an extraordinarily strong movement. Whole armies executed it, whilst, as a rule, only the leading or the flank corps envelop an enemy acting on the defensive.

He, accordingly, who in war finds himself outflanked during the operations, will find it to his advantage to immediately force his opponent to fight. A battle attracts all the forces to one locality, since its bearing on the issue of the war is so great that no assailant would consent to dispense with strong divisions of his army on the battlefield merely in order to be able to continue his outflanking manœuvres.

If, then, the greatest strength of the assailant lies in bold

outflanking manœuvres, yet the side acting on the defensive is in no wise defenceless in their presence. By resolute action it can deal most effectual counter-strokes. How these must be done, depends upon circumstances, and the case will vary according as the outflanking has been effected only on one wing or on both.

In the first case, an advance with rapidly collected masses upon the part of the enemy's forces which for the moment is most menacing, to wit, the troops executing the outflanking movement, is the most simple operation. If the blow at this point does not succeed, it will yet check the continuance of the menace, and restore to the side outflanked liberty of action. If, on the other hand, the attack upon the corps advancing against the front fails, the situation is rendered doubly critical; for the outflanking movement has meanwhile been continued without interruption and rendered more effectual. In case of success, however, in this direction, a greater result can be achieved; for one part of the enemy's forces would be defeated and the other cut off from him and from his natural communications at one and the same time.

If the flank has been turned on both sides, the task before the outflanked becomes more difficult. In this situation, too, a vigorous stroke against one of the enemy's wings can frequently bring about a change. If Field-marshal Benedek could have surmised what lay before him in Northern Bohemia, and had, in consequence, marched from Olmütz upon Neisse against our extreme left, he would, perhaps, not have won the campaign, but have laid the scene of the first battles in Silesia instead of Bohemia. But such operations require not only great resolution but also a favourable situation from the start. Benedek, at Olmütz, found himself not as yet within the arc of the circle described by the Prussians, but facing the head of one of the wings. Once caught in the centre, it becomes far harder for a commander to extricate himself, since, in this situation, the enemy's superiority, either in numbers or efficiency, finds great scope. An advance against his centre might, it is true, open the

prospect of being able to cut the enemy's line in two, both parts of which were engaged in the outflanking manœuvres, and with this object in view had abandoned their natural communications; but, on the other hand, there exists the great danger of the circle meanwhile closing up and crushing our army in its midst.

Under such circumstances, safety is often found in employing the same forces successively against several enemies, wheeling first right and then left, keeping the several groups separated by dealing vigorous blows, and eventually defeating them in detail, the effects of which tactics are similar to those of a great battle. Napoleon acted thus in February, 1814. Frederick, too, with the same army, defeated first the French at Rossbach, and then the Austrians at Leuthen. Both generals availed themselves of the advantage of the so-called *interior lines,** and with great success. It is, however, incorrect to speak of the advantages of interior lines in an absolute sense, for the general situation of the army acting on interior lines is almost always a very critical one. Such was the case with Frederick in the autumn of 1757, and with Napoleon in February, 1814. An advantage can only be said to exist, in so far as the situation would be still more critical, if, for any reason, movement between the various groups of the enemy became impossible. An army held fast under the walls of a fortress also occupies interior lines, without, on that account, being able to pretend its position to be an advantageous one.

The success of such flitting movements between detached hostile masses depends greatly on suitable distances. If such bodies are widely apart it will be difficult to force any one of them to fight, and the others are necessarily lost out of sight, so that they can pursue their way undismayed. Only when there is reason to credit them with but little love of enter-

* General Jomini gives the following definition: "*Interior lines of operation* are those formed by an army in order to confront several hostile lines of operation, but which are of such a nature that the various corps can approach each other, and co-ordinate their movements before the enemy can oppose to them superior numbers."

prise, can they be left to their own devices. Thus acted the Great King, when, in 1757, he turned away from the Austrians and attacked the French. But even the Austrians, in spite of all their slowness, conquered Silesia with Breslau, and Frederick had to retake it. If, on the other hand, the distances are too *short*, it is impossible to defeat one of the detached hostile bodies without others coming to its aid. In the moment when this takes place, the advantage of acting on interior lines is changed into the disadvantage of being liable to be surrounded on the battlefield. Accordingly, in order that interior lines may be turned to good use, moderate distances are required, so as to enable one of the detached bodies being defeated before others arrive on the spot, whilst not losing sight entirely of the latter. If detached groups are closer together than two full days' marches, it may be laid down as a principle that none of these can be defeated separately, whereby the time favourable for action upon interior lines becomes very limited. If the dash is made too early, there is the danger of merely beating the air; if it be made too late, one is apt to be caught between hostile divisions, closing up from every direction. These considerations make it difficult to arrive at a decision. If the enemy employs his cavalry properly, it will rarely be possible to judge against which of the approaching opponents to turn first. But clearness of view is doubly necessary when everything dictates prompt action. Hence only generals of great determination can profit to the full by acting on interior lines. The irresolute will surely waver, and the uncertainty as to whether he has chosen the right moment, and the right opponent, will nip his operations in the bud. Even Marmont, who originally conceived Napoleon's brilliant operations between the detached groups of the Silesian army, believed, before the period from February 10 and 15, so propitious for the French arms, had set in, that the favourable moment had passed and became dissuasive. Thus he also, though an excellent leader, could only rise to the design, not the execution, of a venture. The original intention

of vigorous action on interior lines in due season will, if the right moment has either not been recognised or has been missed, generally result in an eventual relapse into a defensive attitude or the adoption for the time being of a central position. For this latter the advantage is claimed of being able to await developments, and of meeting any approaching adversary, or of taking the offensive in any given direction, with equal prospects of success. But this kind of benefit is of doubtful value when the main point is to know the direction which any offensive movement should take; if the enemy be allowed full liberty, he will take measures which will make it difficult to decide this question, and the end of it all will be, that many good reasons will be found for remaining inactive. It thus happened to Gyulai, in 1859, in his central position in the Lomellina district, and to many other leaders. In most cases armies are placed in central positions through obscurity in the general situation or, oftener still, through the indecision of the commander-in-chief. It thus comes to pass that only the second of the advantages claimed is realised, *i.e.*, one can run away in any direction with equal facility.

To these general reasons against success in operations upon interior lines, which have always existed, we may add a few additional ones peculiar to modern conditions.

Since, owing to the necessity of being on guard against others, pursuit will generally be out of question, nothing but a complete victory will serve the purposes of a belligerent operating on interior lines. As already stated, we must no longer count upon being able to strike swift and crushing blows. The successes of Frederick and Napoleon lay in a time, already remote, when the independence of the higher commands was not nearly so general and so developed as at present. In those days one could hope with greater reason upon disconcerting a column by a victory gained over its neighbour, and upon deranging all the plans of an opponent. All that is now impossible. Nowadays we must, as a rule, be prepared for a resolute and energetic movement on the

part of all the enemy's generals towards the central point. The great numerical strength of our armies, too, will render the employment of interior lines a matter of difficulty. Prompt combination and rapid manœuvring are essential, and these conditions may be met by one or two, but not by ten or twelve army corps, since masses, such as the latter, require greater freedom of movement than they can obtain in such situations.

One advantage is that the several parts of an army upon interior lines remain closer together, and that the influence of the supreme commander is greater than it would otherwise be. The latter has his troops more under control than his opponent, who is engaged in outflanking or in concentric movements. Uniformly good subordinate leaders are less essential for the success of the undertaking. One or two dexterous commanders, to deal with those hostile groups which need only for the time being to be kept under observation, are all that is required. Napoleon, in the days of Montmirail and Château Thierry, only needed Marmont's help in order to keep off Blücher, whilst Sacken and York were defeated. But the demands made upon the supreme commanders are greater in proportion. Great and prompt resolution, extreme energy, bold daring; these alone lead to victory when one finds oneself in the midst of powerful enemies.

On the whole, it may be said that *it is more difficult to conduct a successful defensive upon interior lines than to execute an outflanking or concentric attack.* To arrive at this conclusion we are not speaking of facts arranged in accordance with abstract ideas, and we do not assume the two opponents to be equally strong, equally efficient, and equally well led, but we speak rather of the reality where consciousness of superior strength induces one of the parties to engage in enveloping movements.

If the combatant armies manœuvre so as to confront each other in parallel lines, everything will depend upon who is the first to decide upon concentrating great masses upon a given point, and then to begin and carry out his designs with

the greater dexterity and energy. This is the only means of gaining superiority by manœuvring, all the rest must be left to battle. In the onset against the enemy's centre, in order to rout him, the danger will again loom up of being outflanked, and of seeing the corps hurrying up from the enemy's wings, appear on one's own flanks. Consequently one would generally be content with a more moderate measure of success, and devote some attention to one of the enemy's wings. This having been beaten, outflanking operations against other parts of the enemy's position can be initiated in natural sequence.

A movement threatening the strategical flank of the enemy will always have the great advantage of compelling him to hastily collect his forces in a direction which is for him at once inconvenient and unforeseen. Benedek's march from Olmütz upon Neisse, which, in view of its feasibility, we will take as an example, would have been productive of similar effects. The concentration of the Prussian forces between Dresden and Neisse could not have been effected without difficulty. But only abnormal conditions can render such an operation possible with large masses of troops.

It is more feasible that the defender, having previously taken up a flank position specially for this purpose, should turn upon the flank of the assailant as he marches by. The strong combatant will certainly not resort to this means, but simply bar his opponent's way, but the weak may make successful use of it. When street-boys fight, and the one who has been defeated conceals himself round the corner of the next street, in order to fall upon the victor again from the side, we see an illustration of the position of an enemy's flank. We should describe this in the first instance as a tactical flank position, but the same simile may also be applied in the wider strategical sense. The flanking position does not block the path of the enemy, but lies alongside and commands it. When, in the early part of October 1806, Napoleon wished to advance from Franconia by way of Hof Schleiz and Saalfeld into Saxony, and the Prussian army was

posted at Jena, behind the Saale, it occupied a *position on the flanks of the enemy*. Clausewitz, with reference to this, says: "The position behind the Saale was a flank position such as is seldom found; it promised excellent conditions for a battle."

He adds the following explanation: "The primary condition of a flank position is, that the enemy cannot evade it, but must negotiate it. This condition is exceedingly difficult to fulfil, and yet it was completely satisfied in this instance. For the French had, between the Saale and Bohemia, such a narrow strip of country for their communications, and this communication with reference to the Saale lay so entirely at the side, that they could not possibly advance without striking at the Prussian army behind the Saale. The second condition of a flank position is, that in a battle itself it may hold out such advantages that it is worth while to occupy it. Now the valley of the Saale is really a deep mountain valley, such as the enemy could only pass in detached columns. On the left bank it is skirted by a level fertile plateau, which allowed our army to manœuvre with the greatest precision. Whilst small divisions of our army occupied the Saale valley itself, and were able to offer a comparatively protracted resistance, our main army was able to hurl itself from a central position upon any portion of the enemy's army which promised the greatest advantage.* The enemy fought with his back to the steep ridge of the Saale, scarcely holding sufficient room to deploy; he fought with the kingdom of Bohemia in his rear, and his line of retreat into the Voigtland at one side."

It is the essential nature of a flank position that it unexpectedly compels the enemy to deploy for battle in a direction and at a point where he has not intended it, and where, accordingly, it is probably extremely unwelcome to him.

* Unfortunately the truth of what we have said of central positions in general was exemplified in this instance. The hesitation as to when and in what direction the offensive should be taken lasted until it was too late to take the offensive, and a retreat was decided upon, during which the army was overtaken by the enemy, and totally defeated.

He abandons his road, thereby cutting himself off from all his natural communications, and deploys to a flank, in order to fight his opponent in any but an advantageous situation. He has, in a sense, unknown to himself, begun a flank march, and is, to his own surprise, stopped in it. Where a flank march is intended, it is the rule to change, within sight of the enemy, from one road to another lying at the side, which follows approximately the same direction. In this case the line of retreat is not parted with, whereas he who is compelled to form front against a hostile position on his flank, abandons it for good. When, therefore, the attack fails, it is difficult to retire with safety.

But, in order to be attended with favourable results, a flank position must fulfil various conditions. The enemy approaches on a certain width of front; if he discovers the position on his flank at an early moment, it will be easy for him to change the direction of the heads of his marching columns in sufficient time to avoid the principal disadvantages which otherwise might be imposed upon him. A flank position is well chosen when the enemy must pass it on a single road. That is the case after he has just passed a great river, and has only a single bridge behind him. In such a contingency, too, he would be particularly loth to turn from the direct course. The flank position, in its turn, exposes a flank to the advancing assailant. This flank, then, must either find natural support in the ground, or lie so retired and hidden that the enemy cannot envelop it. Finally, the obstruction which a flank position must have in front for its own safety, must not be of such a nature as to preclude an attack being made upon the enemy as he passes.

All these varied conditions are seldom fulfilled, and therefore such effectual flank positions, as that of General von Werder at Vesoul against Bourbaki's army marching upon Belfort in January 1871, and that of Osman Pasha at Plevna against the first Russian advance across the Balkans in the summer of 1871, must be regarded as exceptions.

Here, also, the essential point is not so much the position

as the strength of the force holding it. A weak opponent may take up a flank position, but will merely cause it to be watched by a detached force, while the enemy's main body quietly pursues its aims, instead of abandoning them. When Prince Frederick Charles with the Second Army advanced upon Le Mans on January 6, 1871, the French division of Curten appeared at St. Amand upon his left flank, almost in his rear, without checking the general operations for a single day. *It was simply not feared.*

Where it is necessary to save time, or where it is desired to await the partial development of the plans of the enemy before being oneself committed to a definite course of action, temporary recourse may be had to a flank position. If the object has been attained, and the enemy forced to disclose his strength, it may be abandoned before an attack upon it can take place. This was the object of General von Werder's position at Vesoul; in this manner, the Prussians in October 1806 might possibly have escaped from Napoleon's embrace on the Saale, and the French, in August 1870, on the Wied, might have defeated the enveloping tactics of the Germans. In such situations it always behoves to hold out to the last moment, and not allow it to pass by unnoticed, which may easily occur. It is evident that operations of this kind always involve great risk.

Moreover, not only the assailant facing a flank position, but also the defender who occupies it, will be obliged to cut himself off from his natural communications. If the latter wishes also to manœuvre from his flank position, he must possess great freedom of action, be in his own country, or in a portion of the enemy's country of which he is absolute master.

In all manœuvring in war, special regard will naturally be paid to the roads and railways upon which reinforcements of men, ammunition, and commissariat are carried to the front, and upon which the sick and wounded are conveyed to the rear, as well as to all such along which, in case of a disaster,

aid can be found. But considerations of "lines of communication," and of the natural "line of retreat," must not, in a vigorous campaign, be the ruling idea. Attention can only be paid to them in so far as they do not prejudice the advancement of our own positive intentions, which are directed to the annihilation of the enemy. He who talks much about retreating when about to attack, would do better to remain at home. He who is victorious, secures at once his lines of communication and his lines of retreat, and even the defeated army often reaches them, though with difficulty, because defeat quickens its pace, whilst the victor reposes upon the scene of his triumphs. At Zorndorf, by a bold march from Drewitz Heath to Klein-Camin round the left wing of the Prussian army, the Russians regained the natural retreat to their home which they had previously totally lost. Frederick, after his defeat at Hochkirch, first marched off between the two wings of the Austrian army, which were preparing to surround him, to Klein-Bautzen, and then executed a flank march to Görlitz, in order to restore his communications. The eye of the general should look ahead, and not be cast back in quest of help and means of salvation.

However, unnatural relations in regard to the life-strings of an army, for as such the lines of communication may be regarded, are never agreeable. Their best position is behind the centre and at right angles to the front occupied. They are thus best protected from the enemy, and can be easily reached by all the troops, and circulation will, so to say, be unimpeded. The enemy who wishes to threaten them must make a wide turning movement round the flanks. A line of communication extending obliquely to the front is a danger, in so far as one wing will experience greater difficulty in communication with the rear, and the enemy can, on one of the flanks, operate with greater ease against the rear. Most unfavourable is the case where the line of communication runs from a wing, or even absolutely from a flank ; because, in that case, its protection by the army itself becomes impossible, and special measures must necessarily be taken for

its defence, involving an idle drain of strength. Only in the rarest cases will a strong force be restricted to a single line of communication. We, in civilised countries, prefer to assign a separate route to each army corps. The train, reinforcements, and stores of all descriptions from the base at home follow by the same route, which thus becomes a permanent line of communication. Under propitious circumstances, and where armies are not too large, each corps will thus have an artery of communication behind it for its own exclusive use.* When, however, an invasion has penetrated far into the enemy's country, all these lines of communication would probably be combined on a single line of railway for the use of the whole army, since several parallel lines of rail, all leading in the same direction, are rarely to be met with.

As the forward and return traffic upon the lines of communication is continuous, and as many arrangements of a permanent nature have to be made accordingly, it is not easy to change them ; in any case, such a change will take much time to effect. This question must, therefore, receive due consideration in connection with all movements. When corps cross each other, this will naturally also entail a crossing of traffic on their respective lines of communication where a change of direction is impracticable. Crossings of baggage and transports on the march always lead to errors and congestion of traffic. An alteration in the disposition of a corps, which has taken place at the front, is not always communicated to the rear with sufficient promptitude to prevent the baggage wagons, &c., going astray. During a pause in the movements, the general should, if possible, endeavour to re-establish the original order of formation, for which opportunities may also occasionally present themselves in the course of evolutions. Anxiety to preserve the original order of formation should not, however, be carried too far. Mere inconveniences are far from being serious

* This is also in harmony with the administrative autonomy of an army corps, which has to provide for its own wants, and is, in this respect, dependent upon the headquarter authorities for general directions only.

disadvantages. In modern times, troops are really only dependent upon their lines of communication for their ammunition, which must, of course, be brought up from the base by rail. In all other respects there is great liberty of action, and, consequently, the turning of a flank, or a threatening of the rear and the lines of communication, is now of less consequence than in former days, when its effect was often absolutely decisive. The simple geometrical cutting off of a line of communication, particularly, will never again, or rarely, cause much concern.

Anxious solicitude for lines of communication is an inheritance from the old school of strategical faddists, so fond of precept and tradition, which has been handed down to the present generation. Influential general officers expressed misgivings as to the rapid advance of the allied forces into Northern Schleswick and Jutland in 1864, lest the single available line of communication be cut by a Danish landing force. Moltke alone desired such a contingency, as likely to lead to a struggle in the open field, the result of which could not have been doubtful in view of the numerical superiority and the greater efficiency of the Prussian and Austrian troops, and might have decided the issue of the campaign in favour of the latter at a single stroke.*

A line of communication extending at right angles behind the centre of the front forms also the most suitable and natural line of retreat, for an army forced to retire will generally take this direction. Any other line is a disadvantage, owing to the difficulties attendant upon controlling troops in such moments, yet, as we have seen, not sufficiently detrimental as to jeopardise the safety of the army. Lines of communication and lines of retreat may coincide, though not necessarily so in all cases. The ones lead back to the original sources of strength, the others to a point where, at the moment, an accession of strength is likely to be found.

Topographical features play an unimportant part in

* See "Der deutsch-dänische Krieg," edited by the Great General Staff. Vol. I, Appendices 30 and 31.

military movements in the sense that their peculiarities generally affect both parties equally. In whatever direction the enemy moves, we make it our business to follow him. The network of roads is the main factor.

Great military operations depend on a good system of main roads. A retiring army can gain a certain amount of local advantage by destroying bridges and roads. When, on December 20, 1870, General von Zastrow desired to advance from Auxerre upon the Upper Loire in order to support the Second German Army, he found all the roads rendered impassable in such a systematic manner, that his undertaking appeared well-nigh impracticable. But time is necessary for such works of destruction; temporary obstructions we are now very apt to overcome. In order, therefore, not to allow himself to be placed at a disadvantage by the conditions of the ground, the wisest course for the assailant will be to forge ahead, and keep his adversary constantly at the sword's point.

Movements begin on a wide front, and with troops distributed upon as many roads as possible. Wherever practicable, the corps divide, utilising all available secondary roads. When the cavalry discover the enemy, either approaching or stationary, the marching columns concentrate upon his position, and manœuvring begins. An outflanking operation, or an attack by the main body upon a wing or the centre, is initiated, to which the enemy replies with similar measures. He evades being surrounded, changes his direction or his front, takes up a flank position, and evacuates it again if his prospects in the threatened battle appear too doubtful. He is pursued, and falls back, but finds himself gradually more deeply involved. The opposing troops continue to draw closer together.

The purpose of making everything as comfortable as possible for the troops is soon beyond the range of possibility. The baggage, with the exception of the most indispensable part of it, must be left behind. It is left at places whence it can later be brought up with ease. By this means,

the roads immediately behind the leading corps are cleared for others to follow in the same direction, so as to be able to come up to the support of the leading corps in the course of the day of the expected battle. It may happen that two armies pursue the same direction upon a certain number of roads. The leading army had, perhaps, to execute a great outflanking movement. The enemy has shown himself in greater strength than was expected, and a reserve army must as speedily as possible be sent to its assistance, in order that the first advantages may not be lost. The army in front removes its train entirely clear of the line of march of the army following in support, by diverting it to the roads which form the line of communication of the flank corps, and echelons the vehicles in a position from which they can regain their respective corps, or it draws them up to its own immediate proximity. When a further advance is not immediately expected, the supplies are emptied into magazines, or the wagons which follow the troops are charged with an extra load, and the empty vehicles sent to the rear by side roads. In such movements it is proper to adopt *every means of keeping the roads clear, and making room for the movement of the combatants.* Village encampments (*Ortschaftslager*) become more and more like bivouacs pure and simple. Such conditions cannot, of course, last long. The two sides, once they have approached each other so closely, no longer part without fighting.

The battle cuts the Gordian knot. The defeated army endeavours to escape, while the victor strives to catch up with him again. But in order to effect this, and to move with greater facility, he must distribute his masses over a larger space, where they will find more roads. Baggage and columns are brought up; the troops have latterly been badly provided for, and they must be accommodated in more roomy quarters. Once again the enemy has recovered and makes a stand. A fresh concentration of forces is followed by another battle.

Thus the movements of armies resolve themselves into a

constant *separation* and *reunion*. For both, the right moment must be chosen. If the forces are concentrated too soon, it will be necessary either to disperse again, or to march in close formation over a narrow space and upon few roads. In such a case the advantages of concentratioa are neutralised, either by the compulsory fresh extension of front, or owing to an excessive depth of marching columns. The commander who keeps his troops concentrated for too long a period, overlooks the fact that an army requires room to live. The commander who is late in concentrating his forces, or separates them prematurely, risks the defeat of individual portions of his army. The proper connection of movement and battle cannot be regulated by fixed rules. The simplest manœuvres are the best; the main object is not to display art, but to defeat the enemy. A careful study of the map, compass in hand, is the best means of solving the task. Battle demands a combination of all the forces, but it is necessary always to bear in mind that every concentration of troops brings hardships and privations in its train, that quarters and provisions fail, and that diseases find a fruitful soil. Dispersion is therefore preferable, so long as eventual unity of action is assured. *The essential in war is not the massing of troops, but rather their co-operation.*

9. *Actions Generally.*

When Clausewitz describes to us the strategical position of the Prussian troops, in their flank position behind the Saale, in October 1806, as being favourable, and Napoleon's advance between the Saale and the Bohemian frontier as a hazardous undertaking, the question naturally arises as to the Emperor's reasons for placing himself in such a situation, and how he ever managed to emerge from it victorious. The answer is simple. *He was convinced of his unconditional superiority in action.* The superior numbers, the experience of war and the skill of his troops, combined with reliance upon his own ability, gave him the confident assurance that, wherever and howsoever a collision came, he must eventually

emerge triumphant. Such a feeling enormously facilitates strategical risks. Though one's line of retreat be on a flank, a frontier or a river in one's rear, though one be obliged to fight with a false front, and though the lines of communication be situated unfavourably, *all these circumstances are not worth mentioning, if only one is the stronger on the field of action.* The predominant importance in war of the result of battle is exemplified by all experiences and by the history of every campaign. We shall not treat here of any particular battle, but of action generally, in order to examine more closely its main features.

"*L'arme à feu c'est tout, le reste ce n'est rien,*" is a saying of Napoleon, of whom it has frequently been said, that he conceived his strength to lie in the bayonet attack of great masses. If we reflect, that under favourable conditions satisfactory results can be obtained with the rifle up to 1500 metres, and with artillery to the double and treble distance, we shall not be disposed to dispute the correctness of the above-cited maxim. Modern battles are decided by great masses of projectiles simultaneously hurled at the enemy. Though expressions such as "covering the ground with lead," and "sweeping the field with bullets," are somewhat extravagant, still, they are apt in a certain sense, as it is quite impossible for any one to remain standing up without cover, or even to expose himself mounted within the radius of action. Only a would-be suicide may attempt it, for, as is well known, Death never takes such as offer themselves to him. Swarms of riflemen, lying flat on the ground, in a long unbroken line, exchange a constant stream of bullets, till one side gives way. *

* The experiments with machine-guns and mitrailleuses are a portent of modern fighting methods. The present small-calibre quick-firers (5.3 or 5.7 cm. guns), which are capable of firing up to forty rounds per minute each breaking up on an average into eighty fragments, or hurling an even greater number of canister balls—thus pouring forth rather more than 3000 projectiles per minute—almost realise the wish for machines scattering bullets like the drill scatters the seed. There only remains to solve the problem of an adequate supply of ammunition, a problem, which certainly is not easy of solution.

Nevertheless, the legendary bayonet charge — which Suwarrow put in the neat saying, "The bullet is a fool, but the bayonet is wise,"—still retains a deep significance. The rifle causes losses in the enemy's ranks, and the bayonet—the close approach of man to man—augments the impression caused by the former by adding terror to it. Both must go hand-in-hand; for the object is not so much the annihilation of the enemy's fighting men, as the subjection of their courage. The victory is won, as soon as the conviction has been brought home to the adversary that he has lost the day. This conviction he will never gain, in spite of all the vehemence of the rain of bullets, as long as the combatants remain at the same respectful distance from each other. An advance to close quarters will, however, convince the enemy that all his firing does not prevent his opponent from coming to grips with him, and then danger presents itself to him in a threatening aspect. If, then, a determined rush is made from the last position, without any intermediate halt, the enemy, already shaken, will, as a rule, consider himself defeated, and give way. This rush is called a bayonet charge, although the bayonet, generally speaking, plays but an insignificant part.* *The ever irresistible strength o af bayonet charge lies in the conviction forced upon the adversary, that a body of men which possesses the energy to force its way through a deadly shower of projectiles will, if necessary, certainly display the requisite energy to finish him off with cold steel if he awaits its approach.* The shuddering fear of death then drives him to flight.

In the Russian army, the marvellous efficacy of the bayonet is preached even to-day. When, however, illustrious writers, in dealing with it, recommended charging in close formation, the doctrine was carried too far. Close order is impracticable except in situations where the enemy's fire has slackened owing to demoralisation or the want of a clear field, or where it has been put down by the combined effects of artillery and

* In village and wood fighting, when the combatants come to close quarters unexpectedly, it may do a greater amount of execution.

infantry fire, when it becomes merely a question of exploiting an advantage gained by the occupation of certain ground. In a thick wood, or at night, it will be best to work in close columns, than to direct an ineffectual fire of skirmishers amongst the foliage or into obscurity. As the battle dies down, the hostile batteries having either been put out of action or driven off the field, and the bulk of the infantry having already evacuated their positions, only a few belated skirmishers still maintaining a spasmodic fire, the field will be taken possession of by troops in close formation. In all other circumstances, however, the troops will invariably extend in thin lines. The rush in extended order bespeaks a high degree of courage, individual skirmishers being more dependent on self and lacking the impetus given by closed ranks. The ability, or otherwise, of a body of troops to make a determined rush in the direction of the enemy is due, not to dogmatic teaching, but to a uniform practical system of training.

But the transition to extended order must never take place prematurely, certainly not before the probability of serious losses to battalions and companies in close formation renders it absolutely necessary. A company in extended order is partially beyond control, and the authority of its leader is greatly diminished, and it is hard to direct. A battalion in close order can be moved by word of command to the right or left, to the front, or to the rear; not so a company in extended order, although only a quarter as strong. The impulse for a further advance during the action is usually given by fresh contingents coming up in a compact body; for the resolve generally proceeds from the commanders, and these now have complete control over closed bodies only. They are the tools which execute their will. In the first part of the campaign of 1870, when our soldiers were as yet unfamiliar with the new long-range rifles, we often tried to advance within the distance at which our needle-guns were effective, not till then breaking into extended order for the fire fight. Great losses were thus unavoidable; for, whilst

our infantry covered hundreds of metres across the field of battle, they were showered with projectiles, without being able to send back a single one. In such a situation, the French were calm and collected, and fired well; but the Germans soon found a remedy. A very widely extended line was sent forward, which engaged all the attention of the enemy and drew his fire. Under cover of it other troops advanced without great risk. In the latter part of the war, moreover, the aid of the artillery was duly awaited. In this period, charges, which in the month of August, at Wörth, Spicheren, or Metz, would have cost thousands of lives, were successfully executed with little loss; such, for instance, as that executed by the Third Army Corps on the first day of the Battle of Orleans, against the heights of Chilleurs aux Bois, and again by the Ninth Army Corps, at the storming of the Plateau d'Auvours before Le Mans. Other than these simple measures "for avoiding losses" will also be unnecessary in the future. There will be even less need, since the armament of the infantry has since then been equalised. He who studies too much how to avoid losses, will unlearn how to bear those that are inevitable.

The question as to how close we should approach to the enemy before extending, depends upon the ground and the special circumstances of the case. As the impetus for each fresh advance must come from a reinforcement of fresh troops sent into the firing line, it follows that the original distance from it to the enemy's position must not be so great that it will be necessary to halt more frequently than it is possible to reinforce. Besides, in advancing through corn, underwood, gardens, and villages, the extended line is bound to leave men behind, since they are not so closely under the eyes of their officers as when in the ranks. For this reason also, we must avoid passing over excessive distances in extended order. Wise moderation is salutary.

In recent times, it has been endeavoured to regain the fullest possible control in the firing line; to bring disorder into order, one of the means to this end being to make them

very dense. Our present lines of skirmishers often bear a strong resemblance to the long lines of infantry of the time of the Great King, except that ours do not advance in parade step, and do not fire standing, but lying down, and that, moreover, they have lost some of the stiffness of the straight line, availing themselves of the features of the ground wherever they afford the benefit of cover.* A tendency also exists of reviving the practice of a hundred years ago, to regulate the firing by word of command. This problem is now more difficult of solution than formerly; because the present loose order and the noise of the rapid firing tend to increase confusion, the human voice is drowned, and the excitement of the battle engrosses, more than ever, the attention of all concerned, and shakes the composure of the human mind.

The desire to keep the expenditure of ammunition under control is a natural one; for, in case of waste, it may be difficult to supply it, and a body of men that has exhausted its ammunition is for the moment a dead force.† It is also quite correct to assume the probability that a distant object will be hit by some at least of a large number of bullets fired at it simultaneously, where single shots would fail. Again, considering the uncertainties of all speculation as to range, it would appear rational not to let all the men fire with the same sight, but to cause some to fire with sights above, others below, the estimated distance, in order thus to cover a zone with projectiles, within which some of the enemy are bound to be hit. A mass of bullets fired simultaneously at the commencement of an action will possibly allow of the

* The old military idea of the beautiful prevails still too often, even to-day, and may eventually carry us back to the days of Mollwitz. Comfort is derived from the reflection that parade forms will be confined to peace manœuvres, and that they will disappear on the battlefield as a matter of course. It is well, however, not to under-rate the force of habit, which may make unreal show a serious stumbling-block in the days of real war.

† The experiences of the last great battles have, however, proved so far that, with the present system of ammunition supply, the mutual assistance of troops was quite sufficient to make good a local deficiency. A general deficiency has never occurred.

effects being observed, so that, after various distances have been tried, the right one is found, whereupon all the men will, of course, fire with the same sight. In the case of very small detachments the suggested process of ranging is not a practicable one. But the success of such endeavours to regulate the stream of bullets hurled at the enemy is never quite certain, and it were an illusion to believe that a number of men could now be employed in battle like an animated mitrailleuse, to be directed at will, now here now there, at the word of command. This is only apparently possible at field-firing in time of peace; for the thinking faculty of the ordinary private soldier works far too slowly as to be capable, between the moment of naming the target and the word "Fire!" of keeping his mind, eye and weapon on the object.* He hears the sound of the voice, fires in the direction of the target, and, as a rule, only awakens later to the consciousness of where his bullet should have struck. It

* The surprisingly good results often obtained at the rifle-butts by volley-firing, at the word of command, certainly prove of what the arm is capable if properly handled, and when circumstances are favourable to its use. But it would be extremely dangerous to estimate the effect of fire in action by the same standard. Irrespective of the fact, that in target practice the men are not perturbed by danger, and all excitement of battle is wanting, and moreover that, as a rule, good weather and normal circumstances are chosen, we must also remember than on the ranges the whole attention of the man is concentrated upon the target at which he is to fire. The manifold perplexing impressions and distracting incidents which in real battle engross the thoughts and senses of the man are here wanting. The excellent history of the Second Regiment of Foot Guards, written by Baron v. Lüdinghausen, called v. Wolff, p. 234, speaks in terms of praise of the musketry instructor of the 4th company, Serjeant Schulz, for having, whilst under fire at the battle of St. Privat, observed that his men, in the excitement, were firing at 400 paces with the back sight of the old needle-gun down, and for having ordered it to be altered. If, then, the simple fact, that a superior in the midst of danger preserves his composure and presence of mind so far as to correct the sight, be considered—and rightly—something extraordinary, an unduly high estimate of the precision of the fire of great masses in battle must not be indulged in. In order to attain similar results, as on the rifle-range, the employment of the correct sight would be the most elementary condition; and if that alone be deemed difficult and its observance worthy of special commendation, what shall be said of the rapid sighting of the target, the proper holding of the rifle, and the steady pressure of the trigger, &c. ?.

often happens even to an educated man, accustomed to think rapidly, that he hears something, but yet asks the speaker what he has said; and then immediately, before the other has had time to repeat his words, himself knows what it was. Such is a simple case of the slow working of communication between the ear and the intellect. Now what, apart from any danger, is difficult, will be wellnigh impossible in the wild excitement of battle. Although, therefore, it is proper to exact the highest possible results in peace training, our expectations must be materially modified in the rude reality of war. A certain and definite influence can be exercised by the officers upon their men at the opening of fire, and some portion at least of this influence may remain active in the subsequent stages. The bulk of the soldiers will thus learn not only how to aim, but also to reason as to the possibility or impossibility of the success of their fire. Accordingly, in the wars of the future, there will be improved chances of the showers of bullets being directed upon the right objects. *As these objects are much more clearly and generally apparent to the attacker, who by his movement is directed upon definite objects, than they are to the defender, it follows that it is a great error to assume that the advantages of the fire-fight are entirely on the side of the latter.*

Given that the volume of fire decides the day, the combatant who can bring all his weapons simultaneously and collectively into action will have the greatest prospect of success. It is, however, impossible to do this completely. We have already seen that one part of the troops must be held back at first, in order to help us in the subsequent stages of the advance. A reserve must also be kept in hand in view of possible unforeseen emergencies, so that all the forces become engaged only by degrees. *But we must reflect that the gradual expenditure of forces is a necessary evil, and not an advantage of the new methods of fighting.*

This must be borne in mind in the preliminaries of an action. A gradual total expenditure of the forces is often brought about by the disregard of preliminary measures.

The thirst of the subordinate commanders for glory, and unrest on the part of the higher commanders, drives the troops by driblets, just as they come up, into the battle.

This cannot frequently be avoided, because the engagement results from unexpected contact with the enemy, and becomes at once so violent that there is no longer any option. But whenever it is at all possible, the assembly and a well-ordered deployment of the forces should precede the opening of fire, and a commander should allow himself time to bring his troops first into the direction in which their attack will be the easiest and the most effectual. *A careful preliminary of the battle secures the simultaneous and collective employment, if not of all forces, yet of the major part of them.* It spares much bloodshed, and, in the course of the battle, fully repays the time previously spent. If, in the future, ample time is taken for preparation, the idea of the gradual expenditure of the forces will be rectified. The duration of the battles will not, perhaps, be ordinarily rendered much shorter, because preliminaries and a thorough preparation require time; but the real decisive action proper will be compressed within a narrow compass, and will again take the form of the great collective effort of a weighty mass, and not as the sum total of a number of small individual blows, which are only connected in so far as they are all directed towards the destruction of the same object. When, in days gone by, salvation in the infantry fight was sought in a repetition of efforts, the troops being formed accordingly in a succession of lines, to be hurled at the enemy one after the other, in order to exhaust the enemy by keeping him in a state of high tension, it was simply a case of making a virtue of necessity. The mischief habitually arising from the incompetence of leaders was even appraised as the normal condition. To-day such linear tactics would be the less practicable, since the present effective long-range fire would cause almost as many casualties during the movement of one of the lines in rear into the fighting area as in the latter itself.

Even where an engagement ensues upon a sudden encounter,

it will often be possible to keep the fight stationary with only a portion of the troops, the rest being meanwhile formed up in regular order after due deliberation.

What has been said here relative to the action of infantry is equally applicable to the whole army. The preliminary dispositions for battle must provide for the co-operation of all three arms. Now, more than ever, the artillery is the indispensable companion of the infantry. It makes an opening where the latter is not able to force its way unaided. It inaugurates the battle, shields the infantry from unnecessary losses where the best troops would be shattered before insuperable obstacles, and gives it support and shelter when it is compelled to retire. As the enemy uses his artillery in a similar manner, the action commences with an artillery engagement, and the infantry attack does not take place till most of the enemy's guns are silenced and their final defeat appears imminent. The artillery seconds the infantry attack with its guns, without itself coming within range of effective rifle-fire. It subdues this latter from a distance, and thus prevents the great disasters which might otherwise befall its own infantry in the attack of strong positions. In spite of the increased power of penetration of modern rifle bullets, which at distances of several hundred metres still pierce stout beams, thin iron plates, light brick walls, and a half metre of freshly-shovelled sand, resourceful riflemen will improvise plenty of good cover. Garden walls built of boulders, which are so common in central Europe, defy rifle-bullets. Infantry posted behind loopholes in such walls will pour its fire upon the enemy as calmly as on the rifle-range, and the best infantry in the world will be impotent in an attack under such conditions. The greater its bravery, the more will it conduce to its own destruction ; and in order to avoid this, it must be supported by artillery.

Since the experiences of Plevna, where the ordinary rifled field-guns, till then used exclusively, proved ineffectual against earthworks, the artillery has provided itself with

special means of acting against troops under cover. As already pointed out, the means to this end varied. One method consisted in giving the fragments of a projectile above the target a very abrupt angle of descent by the employment of a powerful bursting charge. This is possible if the force of the bursting charge exceeds that remaining to the projectile by virtue of its flight. An alternative method consisted in the introduction into several European armies of high-angle field-guns, which throw their projectiles on the target and behind the cover under a very large angle of descent, the bursting charge being, moreover, more powerful still. In the former method it has been the aim to retain the advantage of a single pattern of gun, with the addition of a substitute for the effect of high-angle fire against invisible targets to that of the ordinary low trajectory, as employed against visible targets. This is an important point in so far as the same batteries will be universally available, whereas the introduction of high-angle batteries will alter this condition, and leave it open to doubt whether these batteries will always be on the spot when wanted. By the second method the greater effect of high-angle fire is obtained, combined with facilities for firing from completely sheltered and concealed positions. The last word has not yet been spoken in this question, but it is so near maturity that its early solution seems beyond doubt. Victory seems to incline to the high-angle gun, though the balance still wavers between field mortars and field howitzers.* This forms merely the completion of a cycle, for we must not forget that, before the introduction of the modern rifled gun, field artillery included howitzers and mortars as well as ordinary field guns, and that all three would probably have been replaced by modifications of the new model if new patterns had been invented at the same time. It admits of no doubt

* I should here remind my readers that field howitzers or field mortar batteries are not to be confused with the "heavy artillery of a field army," which has a separate organisation, and is designed for specific purposes. Vide p. 47.

that the artillery of the future will play a more important part against defenders under strong cover, and that it will afford greater support to the infantry than was the case in recent wars, more particularly in the movement which culminated in the Russian attack on Osman Pasha's entrenchments.

Even though, owing to unfavourable circumstances, the projectiles of modern field artillery do not inflict any great material losses, they yet tend to cause the defenders to hide themselves behind cover, and to fire wildly. He who has ever in real war learned to know the difference between an attack upon infantry undisturbed by artillery, and upon infantry which has for a long time been exposed to the effect of artillery fire, will never forget it. The bursting of the first shells in the sheltered lines of the defenders produces an almost instantaneous effect.

Two recent innovations tend to enlarge the scope of the co-operation of artillery with infantry very greatly, the first being the employment of smokeless powder. In the last great battles the greatest obstacle to artillery rendering effective aid to infantry to the last moment of the assault was the smoke of powder, which hung thickly over friend and foe and made discrimination impossible. At St. Privat it was impossible to observe the actual course of the struggle for the village from the not very distant station of the staff of the Second Army; it was believed that the place had been taken when it was yet completely in the hands of the defenders. In order to obviate this evil the artillery frequently accompanied the infantry to close proximity of the enemy. That, however, necessitated a suspension of fire at the moment when it was least desirable, and became the cause of excessive casualties. In the face of modern infantry fire such procedure becomes still more dangerous, possibly impossible, but also unnecessary. Smoke will not in future conceal either the sheltered lines of the defenders or the advancing hosts of assailants, and the latter are no longer in

danger of themselves being injured by their own batteries as well as the enemy.*

The second new feature—the introduction of quick-firing field-guns—will enable the artillery to overwhelm the positions to be taken in the moment of decision with a much heavier hail of projectiles than was possible before. Hitherto undreamt-of effects may be expected in the hour of decision, which will surely raise the faithful support of their artillery in the grateful estimation of our infantry.

Upon the side of the defender the batteries which had been silenced in the artillery engagement again resume their activity, immediately the infantry action begins in earnest. They then hold out with their own infantry in the latter's position to the last extremity, regardless of the danger of falling into the enemy's hand. Even at the last moment they assist in warding off the enemy's onslaught or facilitate the retreat of the defeated defender by their fire.

The part played by the artillery is not a decisive one ; for only a very inferior enemy will allow himself to be driven out of his positions by distant artillery fire, and abandon them before he is hard pressed by infantry. It nevertheless plays a not inconsiderable part. Infantry can no longer dispense with its assistance, without risk of defeat and annihilation.†

The cavalry also will again play its *rôle* ‡ in deciding the day, as in former times, when Seydlitz led the attack at Kolin, Rossbach, and Zorndorf. This hope of the cavalry is amply justified by the recollection of certain phases of the infantry fight in recent wars, when lines of skirmishers were often seen to dissolve under the fire poured upon them, to

* In this situation also high-angle fire is preferable to that of ordinary field guns.

† All infantrymen should realise this and resolve to remain true to the artillery, and protect it from surprise by hostile infantry or cavalry. The artillery is fully justified to expect this, for nothing hampers it so much as the dread of losing its guns through moving too far to the front, while a faint-hearted infantry seems inclined to desert it in the hour of danger.

‡ Vide p. 3.

become thinner and thinner, and, in their endeavour to surround the enemy, to extend unduly, fritter away their strength and eventually lose all cohesion. Their energies became exhausted in advancing through thick corn or underwood, in climbing hills, and in the breathless charge which, perhaps, followed immediately upon a long march and movements in serried ranks across country. Ammunition almost gave out. Many officers fell, and command nearly ceased. In such moments the anxious question must have risen to many lips: how if now the enemy's cavalry appeared on the flank, and swept over the battlefield? Would it not sweep away the wreck of the infantry without special effort? When, on the evening of the battle of Vionville, the dusk descended, and scarcely any infantry remained on the wide battlefield, and the great masses of the artillery of the centre, more than 100 guns strong, stood defenceless, a similar thought arose in our breasts. It appeared that it would have been impossible to check a resolute body of cavalry, boldly charging upon these batteries. This view of the case was one of the reasons for despatching all our available cavalry against the enemy.

Every great battle of modern times will be accompanied by such episodes, but owing to the great distances, those on one's own side will be more apt to come to notice than those occurring with the enemy. Then, again, the semblance of weakness is greater than the reality. French squadrons in 1870 braved death in hurling themselves amidst the lines of German skirmishers, and yet were shattered by the fire of small detachments. Bodies of cavalry present too large a target to be able to hold out within range of effective infantry-fire. They must even avoid the shrapnel-fire of the artillery with its showers of bullets and splinters, before making its charge, and if they do not find sufficient cover, their safety lies in distance. If its commanders ride as far into the arena of action as mounted officers generally are able to do, in order to inform themselves as to the situation, they will nevertheless see but little, even though the smoke of powder

has lifted. The signs of weakness are only perceived in the foremost rank of the opposing infantry, and their behaviour gives the first signal of an impending crisis. While then the cavalry generals hasten back to their squadrons and bring them into action, valuable time is lost, and the propitious moment may meanwhile have passed by. Masses of cavalry in motion are easily noticed. A cavalry division at the trot throws up as much dust as an army corps in rapid movement, and, in fairly open country, it immediately draws all the enemy's fire. The latter knows full well that this is a question of minutes only, for which he can well afford to suspend fire against other objects. It is scarcely possible to miss a mark of the size of a cavalry division. The artillery can turn to account the longest ranges, and up to distances of 400 metres the trajectory of the infantry rifle does not rise to the full height of a horseman. The infantry opens rapid fire, and within the space of a single minute launches innumerable bullets against the approaching enemy. The horses have improved since the days of the Seven Years War, and have greater endurance in charging over great distances, but this increase in their power has not kept pace with the increased effect of arms of precision. Formerly, again, the fighting power of the infantry was broken as soon as their serried ranks were broken and scattered. Now, however, they begin an action by dispersion. Each small detachment is in itself a useful whole; even the individual does not feel himself defenceless so long as he has any cartridges left. The relation between the cavalry and the infantry has become completely altered. Seydlitz, Zieten, Driesen, Gessler, were able to keep their squadrons in readiness within 800 paces of the enemy, to ride up in person to within half that distance, survey the enemy, as, in these days, an infantry brigade at drill is inspected, seize the moment when the lines began to waver, and then hurl their force upon them. It was only necessary to penetrate at one point, in order to roll up the whole line of battle afterwards. Now, however, success is infinitely more difficult to attain; even

infantry that has been ridden over by cavalry is not put out of action, but only its fire is temporarily interrupted. By repeated charges, the cavalry hopes to work surprising and enduring effects. Whilst the leading squadrons draw the infantry fire and attract the enemy's attention, the clouds of dust raised by them will shroud those following and enable them to draw near without being perceived and with little loss. Hilly and covered ground, moreover, which is more favourable to mounted action than the open plain, will afford it the opportunity of making surprise attacks. But even these advantageous circumstances will only rarely neutralise the great superiority of infantry fire.

We certainly often hear the remark, that it is only necessary to induce the cavalry to expose itself in battle as much as the infantry, in order to achieve great results. But such persons do not reflect that this is demanding something quite unreasonable. Clausewitz, after describing the futile charges of the French cavalry upon the grenadiers under Prince August at Prenzlau, says: "*The author has convinced himself by this instance that it lies in the nature of a trooper not to wish to be shot on such occasions.*" The possession of a horse furnishes a man, in the hour of the greatest danger, with the means of saving himself; and it cannot be expected of him that he should not avail himself of it. The infantry also, would, often gallop away, if it only had horses. But it cannot escape the enemy, even when it perceives him to be stronger. The marvellous obstinacy of its resistance, which at times justly rouses our astonishment, is partly due to the fact that it must either defend itself or be utterly lost.

To make use of the horse, in order to escape death, comes so natural to our human feelings that we consider flight on horseback far less disgraceful than flight on foot, even when the motives and the objects are identical.

Schiller could allow the Duke of Friedland to confess quietly:

> Und dieses Thieres Schnelligkeit entriss
> Mich Banniers verfolgenden Dragonern,

without fear that his hero would lose respect in our eyes.

How different would it have been had he put into his mouth these words:

> Und *meiner Beine* Schnelligkeit entriss
> Mich Banniers verfolgenden Dragonern.

It would have morally annihilated him, although to save oneself on foot is, perhaps, only a test of greater tenacity, physical strength, and presence of mind. Wallenstein *riding away* remains a hero; the same *running* away becomes a ridiculous coward, on whom the curtain would at once have to be rung down.

Successful engagements by bodies of cavalry are admittedly possible.* Whether they will, however, be so frequent as to deserve recognition as a factor influencing the methods of warfare, can only be learnt from experience. We will be partial in our judgment (as every soldier is entitled to be) and say: "German infantry has nothing to fear from the enemy's cavalry; let us see, whether our cavalry will make itself feared by the enemy's infantry." The shock of masses of cavalry will be most effectual on the enemy's flank, where they are both least exposed to fire, and where the repulsed opposing cavalry will shield them. If such a wide sweep is impossible, a slanting blow against the flank will be a good alternative. In very obstinately contested and scattered battles, cavalry may even attack the enemy's front, dashing through its own infantry. In former times frequent opportunities occurred to emerge suddenly from the dense cloud of smoke overhanging the lines of the infantry. But this screen will not avail in future, when smokeless powder will no longer conceal the advancing squadrons, which will be observed long before they pass their own firing line. Hence the success of such enterprises will depend on a state of extreme excitement and confusion in the struggling masses, or on the close or undulating nature of the ground. In critical moments, a

* Vide p. 46.

cavalry charge, even though unsuccessful, may be productive of great results; as it interrupts the enemy's fire and renders it possible for its own infantry to come close up to the enemy, which was till then impossible. Only the infantry must take advantage of this rapidly speeding moment and advance simultaneously with the cavalry, in order to gain ground behind it, instead, as generally happens, of being a motionless spectator of the exciting scene. The losses will always be great, but cavalry must not fear them, if it means to succeed in action. Owing, however, to these losses cavalry can only make one really serious attack in a day. The stake is great; and therefore the resolve and the choice of the moment will be the more difficult.

Cavalry may always be relied upon to render important service against the corresponding arm of the enemy. At the commencement of the action it has to sweep aside the enemy's horse from the front, in order that his position may be reconnoitred. During the engagement it protects the flanks. Being now trained to fight on foot, and having horse artillery attached, it can perform even more valuable service by working round the enemy's wings, and operating on his line of advance, hemming the flow of reinforcements and causing confusion in the enemy's rear.

When, as frequently happened, the artillery advances very boldly and rapidly at the commencement of action, the cavalry may achieve brilliant results against it. If hostile batteries, as was frequently done by the Germans on August 16 and 18, 1870, make sudden attacks with their fire, the German cavalry will certainly never shrink from an immediate charge, and will, a certain amount of loss notwithstanding, regard them as a welcome booty.

We must now examine *the influence of ground upon battle;* but we do not intend to go into details, since they would carry us beyond the purpose and scope of these studies. The effect of ground upon battle has diminished latterly, because, as we have already repeated, ultimate success no longer

depends upon the maintenance of a definite order of battle. Its effect is least in respect of the principal arm. Wherever a man can go, an infantry soldier can carry his rifle, and even high mountain ranges do no longer prevent him from fighting. In most cases ground will affect both armies alike, both in movement and battle. In dense forests, or in rugged mountain districts, the defender enjoys no greater facilities for the employment of large masses than the assailant. Sometimes, however, any existing advantage of the ground is entirely on one side; and, as the defender has the choice of the theatre of operations, this advantage will generally be his.

The first consideration is the supremely important question of roads. Next in importance is to ascertain how far the terrain is favourable to the effect of our arms, and how far it hinders that of the enemy.

The strength of positions is no longer determined by obstructions, such as watercourses, valleys, and precipices in its front, but by the nature of the ground as affecting fire action.

In the case of a river valley and meadow-land lying between chains of hills or declivities, which extends beyond the range of artillery, the conditions of the battle are such that the assailant must send his infantry down to the low ground and cause it to attack the opposite slope without the support of their own batteries. The battle will here be very unequal, as the artillery and infantry on the side acting on the defensive will be combined against the infantry of the attacker. Valleys of this type are of much greater importance than others of similar features, but of less width, so that the defender's artillery commands the approaches from the opposite side. In this second case, it is no longer the ground and the position, but the superiority of the artillery that is decisive. If, by the choice of the battlefield, the use of one of the enemy's two principal arms can be precluded, whilst both remain available on our side, we shall be in possession of an advantage which can scarcely be counteracted

by superior numbers. But in this case the condition must be fulfilled, that the enemy is compelled to attack by great interests at stake. Otherwise, by eluding us, or turning our flank, he will deprive the strong and advantageous positions of their advantage for the defence.

High and commanding points, villages situated on hills, &c., which strike the eye from afar, and which, therefore, will be recognised at once as positions of strength, as keys and supports, have in these days the very serious disadvantage that they naturally attract the enemy's fire, and are difficult to hold. They become the mark of all the guns and rifles of the attacker, and their garrison, in the place of an expected protection, perceives only a rapid increase in its own losses. Plain ground, possessing a few advantages, is to be preferred.

This brings us to the subject of artificial means of defence. In view of the intensified fire effect of modern weapons their value is certainly undeniable, but is nevertheless merely relative. The outskirts of villages prepared for defence, trenches on high ground, strong barricades, and similar defences, afford the infantry behind them some protection against bullets, and thus enable them to fire with composure and deliberation.* But on the other hand, they attract the attention of the enemy, and will cause him to be more thorough in his artillery preparation than, perhaps, he would otherwise be in the heat of the conflict. Every prominent mark is an advantage for the assailant; it facilitates his leading, makes it possible to estimate ranges with greater exactness, and thus more than counterbalances the advantages accruing to the defence. In ordinary trenches the casualties become very heavy unless they are carefully concealed from view by covering them with turf, corn, or weeds, and thus giving them the colour of the adjoining ground.

Hence in the selection, the inspection, and the preparation of a position, the question of fire effect must be paramount.

Next in importance are considerations of unity of com-

* Vide p. 313.

mand. Any impediment in this regard arising from the nature of the ground constitutes an undoubted disadvantage for one of the parties concerned. In this connection the character of troops is, however, a material factor. If they are accustomed to independent action, and if the subordinate commanders are capable and enterprising, the import of such disadvantage will be considerably diminished.

Finally, we must not fail to observe that the dispersion of the forces, which is necessitated by the nature of the ground, may exert a certain influence upon the *bearing of the troops.* We have already seen * what an unfavourable effect must be produced by a splitting up of the forces—although sometimes demanded by circumstances—into various detachments fighting side by side, yet so dependent on each other that the defeat of one brings the others also into an evil plight. Every dangerous division of troops will have the same consequences, though sometimes such a situation may be relatively advantageous in its results. We may remind our readers, at this point, of the well-known historical fact that Field-Marshal Moltke, in his younger days, advised the Turkish general, before the battle of Nisib, to draw up his army with its back to the Euphrates. This is one of the most striking instances of the manner in which each particular case should be treated in war; for considering the character of the armies confronting each other, the victory could almost with certainty be assigned to the side which offered any resistance, however slight, and this could not be ensured more effectually than in a situation where the road to flight was barred.† Cortez, likewise, burnt his ships solely in order to inspire each of his warriors with the resolution of despair. The same effect will be produced in every advanced guard which, having come through a pass, or crossed a river, finds itself face to face with the whole of the enemy's forces. Here even the simple private soldier understands that retreat is

* Vide p. 261.

† As is well known, Field-Marshal Moltke's advice was not followed, and the battle was lost.

synonymous with destruction, but that the situation will improve every hour with the advent of the main body of his army. This it is which lends to the defensive such marvellous tenacity and endurance, whilst the opponent lacks a similar powerful incentive. It certainly may strike the former what an advantage it would be to sweep his adversary back into the river which he has just boldly crossed ; but his own existence does not depend upon the success of this endeavour, and hence also he devotes less energy to his object. This, too, explains, irrespective of the great weakness due to great extension of forces, that we so rarely hear of successful defences of rivers. The Lower Danube, one of the greatest natural barriers in existence, has, during the various Russo-Turkish wars, been crossed more than twenty times in the very face of the defending armies.

In intrenched positions, moral effect is also a material factor, frequently more powerful than its actual importance warrants. The consciousness of being led against entrenchments inspires the soldier with uneasy sensations.* He is afraid of meeting with impediments, as against which all courage is unavailing. The defender, in his sense of weakness, is inclined to exaggerate the reputation of the strength of his intrenched position, and is very apt to meet the ready support of the uninitiated, by reason of public interest in field works. When a newspaper reporter gains access to them, he attaches great importance to his discovery, and supplements reality from a bountiful imagination. Every one who fought on the Loire will readily recall to mind the descriptions of the intrenched camp of Orleans, of

* At the northern entrance of the hamlet of Cercottes, the French had erected a very strong barricade, behind a cutting in the main road, which during the battle of Orleans, on December 4, became the target of the artillery of the 9th German Army Corps, so much so, that just behind the redoubt the dead lay piled thicker than anywhere else upon the battlefield. On the morning of December 5, a Magdeburg fusilier stood there, and, surveying the skilfully-made barricade and the approaches on either side, addressed the French corpses lying about, saying, "Can't you see that all your scratching is of no use?" But this truth only comes home to the ordinary soldier after considerable experience.

the batteries of ships' guns of heavy calibre, the iron grates, the wire entanglements, the double and triple lines, the mines, and other horrors, which appeared in the French, and subsequently in German and English newspapers, and will also remember that they were not quite without effect. The moral effect produced by reports of strongly-fortified positions can, therefore, be put to good use to deter the enemy from an attack upon a particular place. This was the object of the entrenchments eventually made by the Germans south of Orleans; for, considering the weakness of the troops garrisoning them, it could not be seriously intended to defend them, after the army had turned westward.

Appropriate use of the features of the ground or of intrenchments, tends to promote that economy of forces, which becomes doubly important when battle is impending. Naturally strong portions of a position are weakly held, by which means extra strength can be gained for other than purely defensive purposes. This wise economy must not, however, be confounded with sheer parsimony. It only requires a clear discrimination between the Unimportant and the Important; frugality in the first, liberality in the second case. Thus we shall be enabled to proceed with sufficient forces to that phase of the battle, from which we hope for a favourable issue.

The necessity and utility of strong reserves is often spoken of. This dogma stands in close relationship to that of the gradual consumption of the combative forces, and is regarded as unassailable. Hence, even in peace manœuvres, we may frequently see an attack by great masses of infantry, of which only a small portion is in extended order and actually using its weapons. All the rest follow in close formation with drums beating and the shout of hurrahs, as though that would suffice to disperse the enemy. Every reserve represents a dead force.* Soldiers marching in rear of the lines of

* We do not mean here those small compact detachments which, at the beginning of an action, are held in hand in order to serve as feeders in the course of the battle, as need arises, but those larger divisions which the

skirmishers do not inflict any damage upon the enemy, and at most help their side only by the fact that their presence tends to raise the courage of the real combatants. The reserves are not of use until they are brought into action. Since the simultaneous employment of all the forces yields the highest effect, it might even appear to be a mistake to detach reserves at all. But they are required to meet unexpected turns and emergencies in the battle, which are always bound to occur. If the situation is still so very uncertain that it is believed necessary to be prepared for many surprises, the reserves will, of course, be made strong. As the situation clears up, and the conditions on the side of the enemy are seen more distinctly, the strength of the reserves will be reduced proportionately. A situation is even conceivable in which it would be quite correct to dispense with a reserve entirely; for instance, when the enemy's strength is exactly known, and his forces have been deployed in their entirety. However, such eventualities never occur in reality, and, therefore, we must never fight a battle quite without reserves. But the fact remains, that *strong* reserves are not invariably the most practical, but reserves which correspond to the existing situation. Excessively strong reserves are not the result of a good, but of a decidedly bad, system of economy, being simply a wasteful scattering of forces, which frequently remain unemployed, whilst they might have ensured a favourable issue of the battle. "Generals who keep fresh troops in reserve for the day following the battle, are almost invariably defeated. If necessary, the very last man must be brought into action, because, on the day following a complete victory, no impediment remains to be surmounted; the respect in which he is held alone assures the victor fresh triumphs." Great generals—as, for instance, Napoleon, the author of the preceding quotation—have been renowned for the able use of their strong reserves, but the praise bestowed on them should

general reserves to himself to employ according to the ideas which suggest themselves during the action.

more correctly have been given to their general ability in using all the means at their disposal to the best advantage. With only a part of their army they involved their opponents' entire forces in useless fighting, and then with the rest, as with a second army, the product of wise economy, they began to carry out their original plan of battle. Here all idea of a reserve disappeared, because a definite *rôle* had been originally assigned to the troops not engaged in the first phase of the battle.

The smooth concatenation of all the various acts in the execution of a plan is of supreme importance in battle. This sounds quite a matter of course, but, nevertheless, it is not so, for the history of many modern battles shows that this has actually been wanting. Artillery were brought up after the infantry had been broken against an obstacle. Fresh troops were only brought up for the decisive stroke after those in front had been so far used up, that they could be of little or no assistance in the most critical moment about to ensue. The cavalry was called up, when the moment for a charge had already arrived, whereas this ought to have been done when that moment was approaching. Presence of mind has, as a rule, been found less wanting than prescience. This latter springs from experience, practice, and that height of equanimity, which, even in the hours of the greatest excitement, leaves itself time for mature deliberation. It is, without doubt, difficult to be in the midst of action, to be entirely absorbed in the events of the moment, and, at the same time, to foresee what is likely to come, to think of what must be done, and to prepare accordingly. Yet this is precisely the task of generalship. If we have often, in our recent campaigns, seen an engagement as the result of a sudden encounter, that the troops were hurried into action just as they arrived on the field, that their efforts were divided, and that, owing to want of co-operation, the losses were unnecessarily great, the experiences thus gathered will surely not be wasted. *The action of the future will demand more thorough preliminary preparation*,

a clearer conception of the object to be attained, a more careful arrangement, a more intimate co-operation of all three arms, and the simultaneous employment of all available troops to decide the combat.

The new and surprising feature will probably be, not so much the increased fire effect, of which we have already had astounding examples in recent wars, as the introduction of a new impelling agent, without smoke and loud detonation, which the advance of science will supply. In view of modern developments, the old gunpowder has become antiquated long ago, and its supersession is merely a question of time. Finality has certainly not yet been reached in the matter of smokeless powder, but even the results so far obtained will alter the face of a future battlefield in many respects. Ascending clouds of smoke will no longer betray the positions of hostile batteries, and it will even be possible to count the guns fairly accurately. It will no longer be possible to guide one's own skirmishers by the fine lines of white smoke which so clearly marked the firing line of the opponent. It will happen more frequently than ever, even at short distances, that fresh troops join the firing line unobserved. Illusion, error, and false measures will find greater scope, and the task of leading will become more difficult. The necessary preliminary reconnaissance of the enemy's position will require greater care and more time. This branch of duty will be cultivated by the general staff to a hitherto unknown degree, and will be practised more assiduously in time of peace. Though perhaps differing in form, reconnaissance will resume its nature of the days of line tactics, when no effort was spared to study every detail of the enemy's dispositions and to discover his weakest spot. Increased insecurity and the higher effect of firearms at long ranges will tend to extend the distance between the contending forces at the first exchange of shots, since both will be apprehensive of surprise, and will strive cautiously to get closer to the opponent. On the other hand, the absence of smoke may increase the influence of the higher authorities.

After careful observation of the positions of the opposing armies from a well-selected point, the situation will become much clearer. Orders regarding localities and the means of approach will be given in more precise terms, and the commander-in-chief will not only be in a better position to regulate the combination of various bodies of troops and to ensure the harmonious co-operation of the different arms, but will also be able to perceive the results of his measures. The battle of the future will thus develop slowly, tentatively, and guardedly, but when the crisis arrives, greater vehemence will be displayed, and the results will be more decisive.

We very frequently hear of the various objects of battles, to which, it is said, a corresponding method of fighting must be applied in each instance. Principal and secondary engagements are spoken of, demonstrations, holding attacks, and decisive battles, in which the enemy on one occasion is to be annihilated, on another shaken, on the third deceived, and on the fourth checked. Reconnaissances in force play another *rôle*; in them the enemy is engaged, in order to learn something of his condition, whereas, properly speaking, information should precede the battle. It would lead us too far, were we in this place to treat of the several phenomena. Tactical text-books treat of the subject in sufficient variety.

The natural object of all battles is always to annihilate the enemy. Every object in war will thereby be attained in the most complete manner, even a gain of time. The commander of the rear-guard, whose duty it is to render it possible for a retiring division to gain a start, cannot fulfil this object better than by stoutly repulsing the pursuing enemy. But as he usually lacks the strength to do this, he must endeavour to give the impression that he is very strong; must immediately deploy the whole of his artillery, spread out his infantry to inspire the enemy with fear, cause him to relax his pressure, and induce him to prepare for a serious combat, which the rear-guard promptly eludes.

An army corps in action, which has been pushed forward against the powerful front of a whole army, whilst the

commander-in-chief endeavours to snatch victory by turning a flank, must not, of course, attack at once with its full strength, because it is, by itself, too weak to achieve any telling result. It must hold back, open a sharp cannonade, and deploy its infantry, in order thus to impress upon the enemy that if he moves he will be attacked in real earnest. In this way the mode of fighting is regulated in a natural way by the relation of the forces to the object in view. To order holding attacks or demonstrations is a serious matter, since it depends upon the enemy whether the character of the operation can be maintained. Classification and specific nomenclature are somewhat dangerous, because an exaggerated idea of the usefulness of secondary operations is apt to foster a penchant for halting action and half measures. In any case, an army fights and uses its weapons as well at one time as at another, but will not precipitate the final decision till it sees reasonable prospect of victory.

10. *The Battle.*

The essential feature of war is the battle. It forms the crisis which decides all questions at the moment in suspense. It is the sword of Alexander which cuts the Gordian knot. Each battle marks a new epoch in the campaign. A single great battle has often solved the whole of the complications, as did that of Königgrätz in 1866.

We have already seen* that victory without a decisive battle is impossible, all art and science of war notwithstanding. Even the weakest combatant does not lay down his arms to strategical combinations. Though he may perceive in them superior genius, he will nevertheless endeavour to rend the toils by brute force and to restore the lost equilibrium.

The attacker seeks to bring about the battle, the defender knows that he cannot permanently avoid it, and accordingly prepares for it. He expects it, and will desire it at the

* Vide p. 282.

moment when attendant circumstances render his position more than usually favourable. It is his sole means to better his position and free himself from the crushing weight of the attacker. The instance of Daun, at Kolin, teaches us, that on the battlefield the capricious goddess may throw at times a rose into the lap of a passive defender, when she has turned away in anger from her erstwhile favourite.

The battle, accordingly, will always be the pivot on which all warlike events will turn. If at Solferino 160,000 Austrians fought against 150,000 allies, at Gravelotte-St.-Privat 200,000 Germans against 130,000 French, at Königgrätz 221,000 Prussians against 219,000 Austrians and Saxons, at Leipzig 290,000 allies against 150,000 French, in the battle of the future armies of 300,000, and even of 400,000, combatants, will oppose each other. If the Great Continental Powers can place twenty army corps and more into the field, there is no reason for assuming that the greater part of them will not be found on the battlefields, upon which one day the fate of nations will be determined.

Of what, under such circumstances, the appearance of the battlefield will be, even Gravelotte, Königgrätz, and Leipzig fail to give us a complete idea. Its aspect will be altered, not merely by the increase in the number of combatants, but modern weapons, and the tactics therefrom resulting, will no less be of influence. The theory of war points to restricted space and narrow fronts, in order to obtain the proper depth and, with it, the proper weight. Practice pleads irresistibly for extension, so as to enable us to bring all our excellent rifles and guns into play in the line of battle. *Practice is here the stronger part, and extended fronts will be the rule.* On August 18, 1870, the front was not too large for the attack, and, on the right wing, space was wanting more than troops. As double the number of combatants may in the future appear on the field, a line of double length will not be improbable. Upon lines of from fourteen to eighteen miles in length, no longer army corps, but whole armies will fight side by side.

These great battles will certainly not occur at the commencement of the war. Since the concentrated armies will confront each other very closely on a long line, the want of space will not permit of the simultaneous movement of all parts of the huge mass on a single field. On a fortified frontier the conflict will break out simultaneously all along the line, the result being a *series of isolated engagements between the various army corps.* When, however, the final issue is thus retarded, when the defences do not yield to the first attempt, the field of operations will soon spread out, because both sides will endeavour to withdraw their forces from the scene of partial conflict and to concentrate them at all costs upon the critical point. Thereupon, especially if the defender gains time to make the show of a general advance, the first great decisive battle will be fought in this very preparatory stage. If the battle does not then take place, it will ensue after the breach in the enemy's line of defence has been made. Whilst this is proceeding, the defender has certainly gained time to bring up all his reinforcements, while on the side of the attacker, everything naturally rushes towards the point where the breach is being attempted.

For the present this future battle of the nations still remains for us a Sphinx with unsolved riddles. Technical science strains every nerve to discover new means of increasing the influence of the supreme commanders, and to lighten their ever-growing task. If only their hold on the course of the battle, as it existed at the time of the linear tactics, could be restored, the weird aspect of the new phenomenon would disappear. The telephone, the telegraph, and the signalling balloon come to the rescue; but the excitement which reigns in a battle tends to make these auxiliaries, which are based on the idea of quiet and leisure, of but little use. The one safe means of exercising command is, now as always, the conveyance of orders by the medium of officers. During an action the commander-in-chief obtains but an imperfect knowledge, from the reports sent to him, as to the course of the various separate battles which are being fought

upon the common field. As we have already stated,* it is more in his power to rouse the storm than to control it when once aroused. One day a God-inspired genius will appear, who will find his element in this struggle of the future, and will control it. But for the present we are face to face with a problem, which is rendered the more difficult since peace exercises are but an imperfect preparation in this respect, and give no opportunity of gaining experience. Even the greatest manœuvres, for economical reasons, are restricted to the independent operations of a reinforced army corps, or of two army corps, with one or two cavalry divisions. These manœuvres, the value of which is frequently disputed, represent but a feeble effort in comparison with the proportions of modern war. The theoretical exercises do not go much farther, as they are intended to teach the elementary principles of the higher leading in war. Only the schemes worked out during staff tour under the direction of the great general staff are of a more advanced nature. There thus remains a gap in our system of training for the higher commands. Since the mobilised armies of the future will assume hitherto unknown proportions, the commander-in-chief cannot possibly attend personally to all details ; he must needs restrict himself to outlining his general intentions, leaving a great deal to the initiative of his subordinate commanders. That being so, the need of building up a system of rational independent action is the more apparent. Hence manœuvres should be held as frequently as financial and industrial considerations permit. It is also desirable that larger combinations of reserve troops should take part in them. In case of war we rely upon them as much as upon troops of the line, and impose upon them the same demands and exertion, without, however, assuring ourselves in good time that such demands are realisable. Our reserve divisions would certainly gain in cohesion, and their commanders in confidence and in experience.

The habit of command and a quick eye are acquired at

* Vide p. 160.

peace manœuvres in a higher degree than is commonly believed. If, as we have already seen,* it will be more difficult in future to gain a primary grasp of the situation, it will also be easier to follow its further development, and the occasions for the independent action of army corps, division, and brigade commanders will be multiplied. These commanders should therefore have greater opportunities of practice than are at present afforded.† *It is desirable that small armies should manœuvre for the purpose of training their prospective commanders, and that large ones be handled theoretically*—for no master of the art falls from the sky.

A material distinction must be made between a battle which often takes place by pure chance, in the course of the movements of opposing armies, and a battle before which both parties have been in close touch for some time, and have been able to reconnoitre and make definite plans for the coming conflict. Meckel aptly describes the latter as the "premeditated battle." It lies in the nature of the modern war of manœuvre, in the independence of the several components of an army and of their commanders, that this last type should be the exception, the chance encounter the rule.

Generally speaking, the duties of command in a premeditated battle are simplified; whilst the execution by the troops of the assailant is rendered more difficult, as the enemy also is prepared, and, if he intends to act on the defensive, he has already chosen a favourable position, and, possibly, has fortified it. In the chance encounter the duties of the supreme commander are more difficult. He has not had time to make his preparations, and must, accordingly,

* Vide, pp. 329.

† Colonel B——, "La Poudre sans Fumée et ses Conséquences tactiques," p. 56. "Malheur, à cette heure critique, à l'armée qui, par une insouciance coupable, ne se sera pas préparée dès le temps de paix des commandants de corps et de division, voir même des brigadiers et des colonels rompus aux maniements des masses, doués de ce coup d'œil qu'une pratique sérieuse et constante des grandes manœuvres d'automne, donne à un plus haut degré qu'on ne le croit généralement."

improvise his measures. He finds himself in the face of a certain situation, makes it his starting point, and must immediately make cogent resolutions, without being previously able to gain much information or procure a thorough knowledge of the ground and of the enemy. The soldiers, on their part, have generally an easier time of it, since they do not find the enemy in prepared and appointed positions. The advantages of ground are about evenly balanced on either side.*

Let us now follow the course of the chance encounter, as we know it from the experiences of our last wars.

The enemy, the evening before, has quitted his positions, and begun fresh movements, the object of which is not as yet quite clear. We attribute to him the intention of withdrawing, without fighting, behind an adjacent line of defence, and hope to anticipate him in his movement. It is possible that we can come up with him earlier, but it is not considered probable. Under these auspices, the commander-in-chief issues his orders. A rapid advance is ordered, for haste is imperative. Yet battle is not mentioned in precise terms; only the general intention of catching the enemy is expressed. This outline is quite sufficient for the subordinate commanders. Special dispositions relating to reconnaissance and mutual support heighten the expectation of coming events on the morrow in a more than usual degree. The cavalry start out as soon as the sun rises above the hill tops —somewhat earlier than usual—followed by the army corps in column of route. For a time the march proceeds without incident. The men in the ranks already imagine that the enemy has made use of the night in order to gain a start,

* Hence results, that the strategical assailant must constantly strive to involve the defender in his movements, and to force him into one chance encounter after another. By the name "chance encounter" we do not mean to imply that it must be left to blind chance whether it comes to a decision of arms or not: we only intend to convey by this term, that the exact moment cannot be determined beforehand. The resolution to attack the enemy, wherever met with, which is the inherent characteristic of every vigorous strategical offensive, is bound to lead to "chance encounters."

when suddenly first reports of the enemy's proximity arrive. Isolated shots are heard at the same time. We have met with weak outposts of the enemy, who have rapidly retired and disappeared behind bushes, houses, and trees. It is still once more, only soon to be lively again. Reports come in more frequently, now bringing intelligence not of mere detachments or outposts of the enemy, but of a column on the march, or perhaps even a camp. The opportunity for a nice stroke appears to present itself; there is the possibility of separately defeating a part of the enemy's forces, of forcing it back, or even of annihilating it. The commander of the advance-guard has ridden ahead to the cavalry, posted in a depression of the ground. From the elevation ahead, the enemy can, it is said, be seen. He there meets with the superior cavalry officers, and the chances of the moment are discussed. The whole advance; it is generally known that the enemy is to be engaged, and all are agreed that the favourable moment must not be lost. An orderly officer dashes back with an order for the battery of the advance-guard to push on. But it is already coming up. The chief of the battery had made a survey from an elevated position on his own account, and had commanded his guns to pass ahead of the infantry, which makes room for it on the road, so far as necessary. A battery of horse artillery has been brought up from another side. Both drive into position, and the first shots follow in rapid succession. The enemy is considerably surprised, the stroke has decidedly succeeded. The battle fever, not to say hunting fever, rises in the brain of all concerned in the enterprise. The troops receive orders to hasten their march. The foremost battalion has made grand strides; covered with dust it moves to the attack, its commander at its head. It comes up in the nick of time; for the batteries, which, so far protected by the cavalry, had made such splendid practice, have now come under rifle fire. The general now issues an order in somewhat vague terms, to the effect that the battalion is to cover the flank of the artillery, and drive off the enemy. The commander of the battalion,

who is but little informed as to what has passed, does not care to ask many questions, as others are already putting too many. He sees that his superior officer is somewhat excited, at all events very fully occupied. He tells off his companies, and shows them the direction, whence bullets fly over their heads. A wood, an eminence, or a farm form objects easily pointed out, and in his haste he chooses this *faute de mieux*. Loud shouts of command become somewhat more frequent; a few misunderstandings as to the general direction are bound to occur, and take up mind and tongue. In the meantime we approach the enemy, and his rifle fire rattles hotly and unexpectedly about our ears. He has occupied the places upon which we were advancing in still greater force. Our losses become all at once very great, another reason against hesitation. Our sole object is to advance quickly, and, in the hot fight, our companies, melting away under the heavy fire, sweep onward in extended order. They finally assail the enemy with determined courage and dislodge him. But he reappears in many places, and even one of the enemy's batteries replies to our fire. The battalion next coming up has received orders to protect the other wing of the artillery, and its fortunes are the same as that of the first, which we have accompanied in spirit. The commander of the first regiment, in trepidation, because two of his battalions are separately engaged in a hot fight, follows with his third battalion one of the two already in action, in order thus, at all events, to keep two together. Soon the whole infantry of the advance-guard—we assume its constitution to be of the normal type—is involved in a lively action. The enemy is stronger than we at first supposed. Several batteries on his side are firing.

A movement is visible on the hill, upon which the generals are standing. The senior commander present joins them. At first sight his face seems to wear the expression of disapprobation. But he listens to reason, and finally approves of what has been done, as, in any case, nothing can now be altered. His first care is to ensure the somewhat wavering

equilibrium. The general of artillery is at hand, and the batteries of the corps artillery are brought up, and they also dash ahead of the infantry. A short time since a new phenomenon has manifested itself on the enemy's side. Beyond a wood bordering on the horizon a pale grey glimmer is seen; it is a matter of speculation whether it be a cloud or dust Now all doubts are at an end; it is the dust hovering over a great column advancing. Now the only question is whether it must be taken to mean a division or an army corps. The commanding general considers it advisable to inform the nearest army corps of his own army of this fact. Adjutants dash in all directions with short notes in pencil or with verbal messages.

Now let us pass to the commander-in-chief.

He has left his head-quarters of the morning in the old place, in order that office work may still be carried on. The removal to a new site is not to take place till midday. The reports of the day's advance are somewhat anxiously awaited, but as yet no battle is expected. Suddenly the news spreads that the distant sound of guns is heard. It ceases for a time, and is then renewed. The significance of the occurrence is discussed. Frequently it is uncertain whether the firing is from one's own army or from a neighbouring one. A few disengaged officers have mounted the heights surrounding the little town, and, on their return, assure their comrades that they could clearly distinguish rifle-fire also; the fighting appeared to them to attain even greater dimensions, and to be of a more serious nature. At last a definite report arrives. It is the same which was despatched by the advance-guard of the corps in action, when it believed it only saw advanced detachments of the enemy before it. The contents of the message, therefore, speak of weak detachments of the enemy that have been alarmed, and which are now being pursued. It is only an insignificant skirmish—such is the interpretation of the message—there is no occasion for fresh measures. All excitement is calmed down again, interest is lost for a moment. After the lapse of barely an hour, the

news arrives, which the commanding general despatched after having personally reconnoitred the positions. It speaks of large masses of the enemy, but cautiously leaves it uncertain whether they are superior in numbers or not, and ends with the communication that the army corps will attack in full force. The scene becomes more serious; the thunder of cannon is reported more vehement. An officer belonging to the general staff of another corps, who happened to be at head-quarters, is despatched with a message to the general commanding his own corps, in which the possible desirability of early support to the troops engaged is pointed out. As yet it is not known whether such a step is necessary or not; but prudence dictates timely provision for the contingency. An officer of the staff dashes off to the scene of conflict. Shortly after, the din of battle becomes louder; it has not receded. The horses are now sent for on all sides; the march into the new head-quarters is abandoned. Further intelligence from the field of battle is altogether wanting—always a significant sign. After a lengthened pause an orderly arrives. But he does not come from the corps under fire, but from a corps not previously engaged. It announces that it has abandoned its prescribed line of march in order to dash with its full strength to the battlefield, where assistance appears to be urgently wanted, and that all other troops within reach had also been informed. The word "battlefield" produces a great stir.

The commander-in-chief rapidly dashes off in the direction of the sound of the guns. After some time he comes up with troops marching quickly towards the battlefield in sombre silence. Each man collects all his strength for what is coming. The sight of the commander-in-chief and his suite first breaks the silence. A loud hurrah peals from the ranks. Soon the first wounded are met with; then a troop of prisoners, frequently under a very large escort, as though to make doubly sure to bring in these first results of the battle quite safely. A larger troop follows, and the number of wounded also increases. From the nearest heights columns on the

march wind downwards, all bound for the battlefield. Now they turn aside from the main road into a valley leading up to the battlefield. The signs of a serious battle in the immediate vicinity are unmistakable. Prisoners are met in growing numbers. Dressing stations are established on both sides of the road; field-hospitals and ambulance columns display the greatest activity, wounded being brought to them in large numbers. Trains halt under cover, thickly crowded together in any open spaces. Ammunition columns are called for by officers galloping in from the battlefield. The dull sound of the cannon and the rattle of the rifle-fire are blended together into one uniform and continuous roar. Above the wooded hills on our right the enemy's shells and shrapnels are bursting, their small clouds of white smoke standing out sharply against the sky. Hurrahs greet the fresh arrivals on all sides; it is scarcely possible to gather details of the situation from a few scarcely intelligible words spoken by a senior wounded officer.

A few minutes more, and the small knot of horsemen halts on the hill upon which, a few hours before, the batteries that opened the battle were planted. The great number of dead and wounded shows how serious the battle has raged here. Our troops have gained some ground, but have not advanced very far. The picture of the battlefield unrols itself to the eyes of the commander-in-chief. Long lines of artillery face and batter each other. Thin lines of smoke, drifting across the slope of the heights held by the enemy, denote the chains of the enemy's skirmishers, advancing at one point, falling back at another. Now and then, compact bodies of troops are seen cowering in folds and hollows of the ground. On the side of the enemy, masses of troops are moving behind the front. Dust, and the smoke of powder and of burning farms, lies thickly over the battlefield, and does not permit of the object of the moment being clearly distinguished. At a still greater distance, compact masses are descried. It is not possible to see how far the flanks extend, but the sound of fire denotes that they stretch beyond the

radius of vision. A general, brought up for the purpose, gives the commander-in-chief information as to the preceding course of events, so far as they have come to his knowledge.

No doubt remains; what lies before us is not a mere engagement, but a decisive battle.

The general features of this sketch will be maintained in the future also, though its latter portion will be somewhat modified. *

In such a situation, the commander who is first to arrive at a definite decision as to the further conduct of the struggle, is bound to gain ascendancy on the field. This is not so easy as it may sound to one who does not know what war is. The commander-in-chief is called upon to give a number of decisions relating to the details of the action on the spur of the moment. Here, a body of troops advances without cohesion with the rest, and must be kept back; there, another regiment is retiring from an important position, and needs support. A third begs for reinforcements; a fourth reports want of ammunition, and a fifth that his flanks are threatened. The cavalry commander asks whether he is to take part in the infantry fight, as he considers the right moment has arrived. The general of artillery wishes to change his positions, and wants to know whether this is in harmony with the intentions of the commander-in-chief. Many such, and even less important, questions are forced upon the commander-in-chief, and, among all these numerous details, he runs the risk of losing sight of the general direction which he should give to the action. The only safeguard of the responsible commander in this respect lies in that power of resolution which subordinates minor details, and formulates all orders and instructions with a view to the furtherance of the main object. Thus, all the numerous forces assembled on

* We must imagine the powder-smoke as non-existent, and substitute for it the barely recognisable dark lines, which denote chains of skirmishers, and the faint figures formed of three small dots, scarcely distinguishable from bush or tufts of grass, which suggest the presence of guns in the distance. The short flash of the first discharge will generally convince us that our eyes have not deceived us.

the battlefield receive a common direction, and are impelled towards this one end. Their joint and harmonious efforts will prevail whenever the enemy's forces lack unity of purpose, and their commander hesitates and loses himself in details. The great predominance of a specially gifted commander over a merely good experienced general will be most plainly seen just here. The former may, perhaps, go wrong in trifling matters, may, on some occasions, give a body of troops faulty instructions, but he will not fail to arrive at a prompt decision in great questions. "Le bon général ordinaire," as the French style him, may give to each battalion, each battery, and each cavalry regiment, most admirable instructions regarding their individual share in the battle, but internal cohesion will be lacking. All the troops do their work excellently in the sphere assigned to them, but one will pull to the right, the other to the left. If the discipline of the intellect in an army is not of a sufficiently high order, to ensure unity of action without the interference of the supreme command, a frittering away of forces is bound to ensue.

If the campaign has been opened on a rational and firm basis, the plan of the battle develops itself immediately out of the ideas underlying the previous movements of the armies. It is well known* that at the commencement of the war of 1870, the operations of all the armies were based upon the general idea "to push the French towards the north and cut them off from their communications with Paris." Now, on August 16, 1870, at Vionville, a situation arose very similar to that sketched out above. On the advance upon the Meuse, we expected a battle on approaching the river, but not at a distance from it; possibly on August 17 also, but not on the 16th; for it was believed that the French, whom we had thrown back upon Metz, must have gained a great start in the night following and on the 15th.

But, contrary to expectation, the Third Army Corps, marching on the right flank of the Second Army, came upon

* "The Franco-German War, published by the General Staff," i. p. 73.

the enemy on August 16. The French, in consequence of unnecessary loss of time,* were as yet much nearer Metz than could have been supposed. The battle was the result of this meeting. The general in command, in obedience to the principle followed by all German armies, decided to attack; but, in so doing, to advance with his left wing, in order thus to face round towards Metz and to throw himself across the main road between the enemy and Verdun. In this way, the enemy was to be held and at the same time cut off from his retreat towards the west, that is, from "his connection with Paris." He was, however, stronger than was assumed; by degrees, his superior numbers began to make themselves felt. In the afternoon, the army corps, after a severe struggle, barely maintained the advantages won in the morning. The commander-in-chief, Prince Frederick Charles, turning the leading strategical idea into tactical execution, likewise determined to dispute the passage of the enemy; the Third Army Corps was to hold itself where it stood; the Tenth, which the field-marshal knew to be coming up on the left, was to attack the enemy's right, in order thus, if possible, to drive the French completely back upon Metz. When it appeared that the available forces were quite insufficient for this purpose,† but that the superior numbers of the French threatened to crush them, a second resolve, that of deceiving the enemy as to our weakness by a series of offensive strokes, however inadequate the means, was promptly added to the first. Many an experienced soldier in the attenuated battalions, whose energies were nearly exhausted, as was their ammunition, must have shaken his head when the orders came to advance again and again and to give the enemy no respite. How serious must not even the well-schooled cavalry officers have looked, when at nightfall their squadrons were again led up to an attack for which there was no definite

* Vide p. 89.

† Parts of the Tenth Army Corps had already been engaged in the battle of the 3rd, without this having come to the knowledge of the commander-in-chief at the time.

object in sight. And yet these measures were the only correct ones. Particularly were they so in their connection with the intention to deceive the enemy and to attract his attention to such an extent that he was neither conscious of his own strength nor realised that his own safety depended upon his forcing his retreat to the west at all costs. The fact is, the "bon général ordinaire" on the French side was confronted on the German side by a great soldier. The latter understood how to confuse the ideas of his opponent, and thus to deprive the action of the enemy's forces of its full effect. This explains how it came about that on this day, this turning-point in the war against the Empire, 120,000 French were unable to defeat 60,000 Germans.* In battle, the truth of the old rule is proved; viz., that each side fears the other. The commander who first disencumbers himself of this sentiment and makes himself morally master of the situation, will surely be the victor; for the forces superior to all others are those which work upon the mind, filling it either with fear and anxiety, or with proud confidence.

Now it is by no means indisputable that the plans of a commander-in-chief are necessarily the best possible on all occasions. If the whole situation could be reconsidered in a study at home, a better plan would be found in many cases. But any practical plan is sufficient; only it must be unswervingly adhered to, and even the least important order must be calculated to advance it, until the penetration of the commander-in-chief leads to a better one. In the dispositions, which vary according to circumstances, there only remains to follow the general principles applicable to every battle.

The case is different with the *premeditated battle.*

The troops have been concentrated, in obedience to higher orders. In preliminary engagements the outposts of the enemy have been driven back upon the first line of shelter trenches, and upon villages, artificially prepared for defence, where stronger bodies take them up. The armies have now

* As to the significance of these figures we must remind our readers of Clausewitz's saying, vide p. 147.

come within close touch of each other, and stand face to face, like two combatants with crossed swords. The one is still engaged in hastily strengthening his lines, while the other is awaiting the last divisions of the army, which are coming up by forced marches. At last all is ready. Throughout the whole day patrols have never lost touch of each other. It was very difficult to check the resulting infantry skirmishes, so as to prevent a premature development of the battle. At night the reflection in the sky of many fires shows us that the enemy is in our proximity. The generals move their headquarters to the front, perhaps spending the last night in one of the bivouacs. Every one feels that the decisive day has arrived, and makes his preparations accordingly. Each side knows the other to a certain extent, so far as general strength and extent of front is concerned. The main forces are certainly still kept back carefully, and concealed as well as possible, though each side endeavours to ascertain their distribution. Finally orders are given for the battle, which has become inevitable owing to the constant friction between the two armies. The leading idea stands at the head of the orders, and is in harmony with the result of previous reconnaissances, ripe deliberation by a small group of distinguished men, and long preliminary labour. Here also it must be assumed as a natural consequence that it corresponds logically to the general views and intentions respecting the conduct of the whole war. With good leadership it may also be taken for granted that all practical preparations of a general nature have been duly initiated. Consequently a favourable issue would seem to be absolutely certain, providing the calculations as to numbers are correct and the troops are brave. The decision, however, lies elsewhere.

No battle takes the exact course as planned. Each has its surprises, and takes a turn somewhat different to what was intended when the original measures are generally no longer applicable. It is thus the affair of the supreme commander to discern the moment when he must depart from his programme and improvise fresh measures, when he shall abandon

what would be theoretically correct, in order to do what at the moment proves itself to be of practical advantage. That is difficult; it is not easy to obliterate the picture of our imagination as to the course of a battle. The action at Saalfeld on October 10, 1806, furnishes an example of the danger of adopting a fixed idea with regard to coming events. Prince Louis Ferdinand, on October 9, was at Rudolstadt, when he received orders to march on the following day on being relieved by the advance-guard of the Prussian main army, by way of Neustadt to rejoin Prince Hohenlohe, who intended to assemble his whole army* in a position at Mittel-Poellnitz.† At that time no straight road led through the hills from Rudolstadt to Neustadt; a détour had to be made by way of Saalfeld, and the bridge over the Saale utilised at this latter place. The French were already very close to this bridge. If they succeeded in seizing it, the prince was cut off from Hohenlohe. Thus he acted quite correctly in advancing on the morning of October 10 to Saalfeld. He acted with equal reason in halting there, because the advance-guard of the main army had not yet arrived, and he was bound to wait for it. The singular position taken up at Saalfeld, which has been vehemently attacked as an indiscretion, was a natural result and was perfectly justified.‡ But the prince had unfortunately buried himself so deeply in fantastical plans as to the near future, that at the critical moment he could not detach himself from them. It was his heart's desire to ward off brilliantly the first shock of the French in front of the defile, when meanwhile the heads of the main army would come up, whereupon he would march off to his army at Mittel-Poellnitz.

If everything had come to pass as he imagined, it would have been a really brilliant stroke. But the French took

* Prince Louis Ferdinand was at the head of an advance-guard 9,000 strong.

† This intention was abandoned on the 9th, but the order to the prince had unfortunately not been cancelled in time.

‡ Saving the impractical nature of tactical details.

good care not to come rashly out of the wooded hills to attack him. From the heights they surveyed the prince's position and its weakness. They turned his position by the mountain tracks with the intention of first seizing his right flank, then to deprive him of all means of escape and to press him with superior forces back upon the Saale. The moment had now arrived for Louis Ferdinand to perceive that what he had hoped would not occur, and that he must abandon his previous plan, in order to pass through Saalfeld on to the other bank, or to retire to Rudolstadt. Only by so doing could he have escaped the danger. But he was no longer a free agent; he was too deeply imbued with his preconceived opinion. The moment passed away; his army was shattered, and he himself fell, carrying into his grave the fair hopes of his country. His example is a warning not to enter into a premeditated battle with fixed ideas as to its course.

The battle of August 18, 1870—two days after Vionville—was a premeditated one. But it also took a different course from what had been anticipated. The right wing of the enemy was not where it was assumed to be. Our intention, not to make a serious attack upon the front until that flank had been turned, was frustrated by the fact that the Ninth Army Corps became too deeply involved in a premature decisive struggle. In this case, partly on the initiative of the supreme authorities, partly on that of subordinate commanders, an appropriate modification of the old plan was adopted. A general and more determined attack was made in front, whilst the outflanking operations were extended more widely in a northerly direction. Thus the original object was attained by new measures.

In the preconcerted battle, accordingly, it is essential that the general should carefully consider, and provide for, the execution of a provisional leading idea, but this should not prevent him from observing the actual course of events with an open mind.

The tenacity with which he adheres to his original plans,

all obstacles and untoward incidences notwithstanding, till calm and clear deliberation produces a better one, must be tempered with a certain elasticity of mind, which enables him to follow in the new direction unhampered by the influence of earlier opinions. The force and rigidity of his will will, in a sense, be more severely tried than in the case of a chance encounter, since the danger and the possibility of failures and alarms of all kinds have been recognised and weighed beforehand, and have had time to operate upon mind and imagination. Rapidity of resolve is, however, less essential, and will rarely be demanded in the early stage of the operations.

A chance encounter and a premeditated battle thus put the genius of the general to entirely different tests, and his genius may prove its mastery in the one, without necessarily showing itself also in the other.

The latest great battles have been decided by an enveloping attack upon a flank. Herein is expressed the same idea as that underlying the attacks of Frederick the Great by his oblique order of battle, an idea upon which all tactical plans should be based. It is not intended to attack the whole of the enemy's army with the bulk of one's own, but only with part of it. As the attacker is generally victorious, when he asserts his superiority at only a single point, this point of view is the correct one, which will reassert itself under one form or another in every attack ; and the future is not likely to bring a change. Only we must now no longer, as in the last century, leave the part of the enemy's army which is not to be attacked quite unemployed. It will be necessary to attack it with determination, in order to hold it to the spot. The mobility of troops, and the independence of the individual leaders, have become so great, that it can no longer be expected that one half of an army on the defensive should look calmly on, whilst the other half is being defeated. Both must have something to do. The demonstrations and feints, by which this end was formerly

sought to be attained, not always unsuccessfully, are based upon very antiquated notions, and will, as a rule, fail in their object. Engagements take too long a time to develop, reconnaissance has become too active, and leaders are generally too well informed to allow a long life to deception by such feeble means. The preliminary skirmishes which form the first act of a battle must be of a uniform and serious character, if they are to induce the enemy to make a blunder. The arm which here plays the chief *rôle* is the artillery. A vigorous artillery-fire, initiated by the attacker, may be taken as the preliminary to a decisive attack by infantry, as well as be the means of concealing and facilitating movements towards other points. The views formed by the defender, and upon which depends whether he adopt right measures or wrong, will frequently not spring from the impression produced by the battle, but result from other circumstances. The strategical situation, the enemy's habits, fortuitous circumstances, news obtained previously, considerations of retreat and of communication with the other divisions of the army, all play their part. In the excitement of the moment, such factors may cause even a capable man to make calculations which will be falsified by succeeding events.

Meantime preparations for the decisive struggle are completed by the attacker. Hidden from the enemy's view by the nature of the ground, or escaping his notice by the conflict already raging in front, the masses move in the direction of the point at which it is the intention to decide the day. The dust overhanging the field, and the din of the battle, are the allies of the determined attacker, as they help him to approach the enemy's position unseen. In the future, also, the object of attack will generally be one of the wings or the flank of a position, since superiority is easiest established there. But in comparison with 1870, a material change will take place. Then, the day was frequently decided by a flank attack executed by a comparatively small fraction of the army, a procedure which will, in future, be utterly impossible. The defender will have learnt

from past experience to strengthen his wings, and to secure his flanks by a good use of his reserves. The expectation of finding an easy task in turning a thin, weak flank, and thereupon rolling up the enemy's line, must be abandoned. The fight on a flank will rather partake of the nature of a difficult frontal attack in a somewhat modified form. The defender will, nevertheless, labour under the disadvantage of being compelled to fight upon a field where he had not prepared for it. He must, besides, bring up from a great distance a part of his still available forces. The attacker has anticipated him in the resolve, and the measures required for its execution, but, on his part, it is now necessary to employ against his opponent's wing and flank, not fractions, but the bulk of the army. If, hitherto, three, four, or five corps have held the front of the defender in check, and one, or half a one, outflanked him, in the future, the smaller numbers will have to be employed for the first, and the larger for the second object. The *rôles* must be reversed.

That, however, is easier said than done. In the first place, the small number of the army corps operating against the defender's front will most frequently find themselves hard pressed, since a considerable numerical superiority will have to be dealt with, and the opponent may resort to a vigorous counter-stroke. Even though this is a difficult undertaking, yet the attacking general will always have to reckon with the possibility of it, and the firmness of his resolution will thus be put to a severe test.

Then, again, it is difficult to move the great masses which execute the outflanking operation within a definite space of limited dimension, without bringing them into confusion. Everything must work with the precision of clockwork, and opportunities of display of skill and experience in the cohesive movement of considerable compact bodies of troops will be more frequent than in our last wars. In this respect we must admit a certain onesidedness. We have only regarded as possible that which is most convenient, and, as such, the usual rule in war, viz. the forward movement of an

army corps in the ordinary narrow formation of columns having a depth of from fourteen to eighteen miles. When, on the morning of August 18, 1870, Prince Frederick Charles ordered his army to make a departure from the general rule, there were many voices raised, declaring this to be impracticable, and further criticism was loud even after the campaign. It was, in fact, the first instance of an innovation, upon which the future will set the stamp of final approval. The army, six army corps and two cavalry divisions strong, was posted that morning fronting the road leading by Mars-la-Tour to Verdun, having Rezonville on the right, and Hannonville-au-Passage on the left flank, in all eight miles in extent. It was to advance thence to the north, in order to wheel to the right or to the left as circumstances demanded. As yet it was doubtful upon which side the enemy would be met. The advance might be one of from five to nine miles; in the case of the left wing, it extended, as a matter of fact, to more than fourteen miles. The commander-in-chief foresaw that if the army corps, concentrated in bivouacs, were first to form marching columns, and then have to deploy from this formation into order of battle, the day would pass by, and a considerable part of the troops would not come into action at all. He therefore ordered: "The advance shall be made, not in long columns, but in massed divisions, the corps artillery between the divisions." Though this order was not executed by all the different parts of the army, though delay and friction occurred owing to mistakes, yet it directly resulted in the whole of the Second German Army being available for action upon the battlefield, which was in part fourteen miles distant. It was criticised only because it ran counter to the law and the prophets, *i.e.*, the theory of the necessity of having thin marching columns for every great movement. Correct as is this theory in ordinary times,* yet we must not fear to break the rule in the exceptional cases, which will be very frequent in, and immediately preceding, the great

* Vide p. 36.

battles of the future. Frederick, on the morning of May 6, 1757, after a night march, assembled 65,000 men in close order upon the heights of Prosik, near Prague, facing the Austrian position. He then turned to the left with the whole of this massed body and marched about six miles (and that over ground not less difficult than that over which the army of Prince Frederick Charles had to pass on August 18, 1870), and by mid-day deployed all his forces for a decisive attack upon the enemy's right which he had turned. Napoleon often advanced in the morning in a single direction with forces considerably exceeding the strength of an army corps, and engaged at mid-day with his entire strength, after having performed a good march. Even old Prussian parade tactics knew how to march 20, 25, or 28 battalions such great distances in close formation, and to bring them in a body to the same point for combined action. All that will again become necessary. A shortening of the columns by marching on a wider front,* the movement of the artillery and cavalry *upon*, and of the infantry *alongside* the roads, in a word, the advance of deployed masses, as was intended on August 18, will, in the future, alone make it possible in many cases to concentrate the numerous forces within the given time upon the point where the decision is expected. The day of battle is an exceptional occasion, and requires accordingly exceptional measures. The broader roads admit of marching in column of half-companies, and the depth of a division will be shortened to less than $2\frac{1}{2}$ miles.† The veil of night may also favour the attacker, by screening his preparations from the watchful eye of his opponent, and by permitting him to approach closer to the hostile position, which, if done in daylight, would entail considerable loss. But no means must be left untried of shortening the distance to be covered in the attack under the enemy's fire, not so much to avoid losses, as to ensure the strength and energy of the army being weakened as little as possible before the final blow. It was

* Vide p. 36.

† Vide Meckel, "Taktik," p. 182.

on the morning of September 1, 1870, the second day of the battle of Noisseville, when the news was brought that during the night the French had attempted to storm the villages which had been disputed on August 31, and on that occasion Prince Frederick Charles first stated that we should often in the future have to resort to taking at night well situated and strongly fortified places, which modern fire renders almost impregnable in daytime, and then to hold them the following day. The help of night will, at all events, prolong the time, usually too short, for preparation for battle. It is, of course, understood that all abnormal measures are not to be resorted to during the movement of troops, except in cases of urgent necessity, for they harass the troops and consume part of their vigour, the whole of which it is necessary to preserve. Battles extending over several days will, however, seldom pass without movements by night.

Decisive action upon a wing or a flank must be brought into proper harmony with the movement against the defender's front. In view of the great dimensions of armies, and of command being vested in so many hands, such accord is only attainable by thorough and careful preparation. The decisive blow must not, however, follow close upon the preliminary skirmishes, in order that time may be given to the defender to commit blunders. Neither must it be too long deferred, since otherwise the want of serious intentions in the preliminary actions will be perceived, and they will miss their object. A quarter of an hour too much or too little may be of the greatest consequence, and determine the issue of the battle. Once it is considered that the moment for the decision has arrived, it must be sought to bring it about quickly in order to deprive the enemy of the time requisite for making a change of front. Care must, moreover, be taken that while the decisive struggle is proceeding on a flank, the fighting in front does not flag, but is continued with even greater energy.

The general must banish the fear that, by making an outflanking attack upon the battlefield, he cuts himself off from

his natural line of retreat, more so than in outflanking movements before a battle, otherwise his resolution and his energy will both be weakened. All his thoughts must be directed ahead. *He who fights the enemy, who is before him, with his full force secures his line of retreat best.* The battle is so much above every other consideration, that all doubts tending to diminish energy in carrying out the plan of battle must be silenced. A good general, in launching his masses for the decisive blow, will never stop to consider his movements in relation to his natural line of retreat, but will only be concerned in the direction in which his forces can act with the greatest rapidity and to the greatest effect. It never occurred to any one in the German army at the time, that, on August 18, 1870, we were fighting a great battle with reversed front, and that, in our outflanking attack upon the French right, we had completely cut ourselves off from our established lines of communication. All attention was centred forwards in victory, and not backwards in retreat, which explains the vigour of the attack. Thus it must be always.

In this sketch of a battle we have instinctively described an offensive battle. What German soldier would do otherwise? But love of system compels us to speak of a defensive battle also.

The attacker dreads the front, whereas it is the strength of the defender, of which the latter must always be conscious. If he has disposed his troops in such a manner that the ground in front is everywhere exposed to a vigorous fire, he must here, at all events for one day's battle, be able to do almost without reserves. But as he must be aware that the enemy will surely seek a second field on one of the wings or in a flank, he must keep the bulk of his reserves in readiness there.

The flanks are the Achilles' heel of the defender. But, as a rule, the general situation will show which of the flanks is most, if not exclusively, threatened, and to which all the available reserves should be sent. Moreover, the utmost care

must be taken that the defence does not degenerate into absolute inertium. The very idea of the defensive acts like a leaden weight bearing on the mind and resolve of leaders.

In the battles of modern times it has almost always been essayed, when the critical moment drew near, to protect the threatened wing against being outflanked, by prolonging the position. But, the attacker enlarging his circle, the flank in question was turned in the end, became weaker and weaker, and was at last rolled up.

It appears to be much safer to protect the wings by mobile bodies, which are not rooted to the ground, and whose special aim it would be to prevent the turning of a flank by attacking the enemy.

During the battle on the Lisaine the Germans had detached an independent corps to a point four kilometres beyond the right flank of their defensive position, and on January 16, 1871, early in the morning, this corps received orders to attack the flank of the attacker. The French, however, foiled this design by themselves moving towards that quarter in force. But the idea alone of defensive measures of this kind is of value as an example. It has its counterpart in the plan of a battle which was expected but did not take place. At the beginning of the war of 1870, the Second Army selected a battlefield close to Mannheim, upon which it intended to receive the French, in case they should prematurely take the offensive. Four corps were to form the front; one each on the right and left wing were to manœuvre to protect the flanks, and one serve as a general reserve. *The more agile the defender, and the less he feels himself bound to the first position chosen, the stronger he will be. In war, agility and activity are convertible terms for power.*

As in evolution,* so also on the battlefields, the defender will be able to defeat an opponent's attempts to outflank him by offensive blows struck from the front. This certainly demands much resolution, great perspicuity, and dexterity in

* Vide p. 287.

seizing the right moment, because a counter-attack generally leads right into a circle of fire. Yet what is difficult is not, on that account, impossible. If we imagine, on August 18, 1870, the French Guards ready in reserve behind the right French wing, instead of behind the left, and a Bonaparte on the heights of St. Privat, a counter-attack on the part of the defender on St. Marie aux Chênes against the thinned and exhausted battalions might have resulted in a great success at the moment when the attack by the Prussian Guard had come to a stop, and the effects of the outflanking movement by the Saxons had not as yet made themselves felt.

Yet it is erroneous to deduce from this, as is often done, a reason against outflanking operations in general. The "enveloping mania" is often mentioned in terms of reproach without reflecting on the present natural tendency to look for victory on the enemy's flanks, which is, moreover, quite in conformity with the temperament of our army. A body of troops meets with the enemy, deploys, cannot make any impression, and maintains a stationary combat. Another comes up and soon perceives that in this fashion any advance is impossible, or, at least, extremely difficult. Its commander has been trained to independence, to take the initiative, and to act on his own reasoning. He accordingly seeks his own road, upon which he hopes to make his way more easily and quickly. This results in a gradual feeling for the enemy's flank, and a more and more extended movement in that direction. But the instances of Noisseville, Beaune la Rolande, Beaugency, the Lisaine, and others, prove the scant prospect of success of a purely frontal attack. We arrive at the same conviction by studying, in those great battles which have been decided by an outflanking movement, the situation up to the moment when the outflanking movement began to show its effect. Spicheren, Wörth, St. Privat, &c., prove that a frontal attack is not only a very costly, but also a futile struggle, by which alone the day would never have been decided.

Fire effect decides the victory, but nothing favours it more

than the enveloping manœuvre, which confines the enemy to the narrow space of the battlefield, surrounds him, and exposes him to the effect of a cross-fire. The encircling grip of a battle like that of Sedan, displays this annihilating effect in the highest degree. Colonel Blume rightly concludes his treatise upon Defensive and Offensive with the words: "The *enveloping and simultaneous* advance of all our forces against the front and flank of the enemy, gives the best guarantee for the ascendancy of the attack over the defence." *

Outflanking attacks, if too weak, will, in the future, certainly fail in their object; if made in sufficient strength, they may be defeated by the independent action of troops detached beyond the flanks of the position, or by reserves stationed behind the wings of the defender; while rash ventures of this description will be duly punished by an effectual counter-stroke. But that is not sufficient reason for condemning flank attacks, and the tendency in this direction, on principle. If we were again to train our troops to hurl themselves against the front of their opponents, as has been recommended by certain busy writers, we should harvest defeats instead of victories. The ardent opponents of outflanking movements, besides fear of dispersing the forces and the resulting confusion of units, also entertain a vague idea that, after a great war there must be a complete revolution in tactics. The absurd manifestation, so often observed in the period of peace following a brilliant campaign, of the victor gradually falling into the errors of the vanquished, disregarding his own approved qualities, is traceable to the same idea. The opposite of what has proved its excellence is adopted, merely because it is the opposite. A leader who has found a source of great strength in allowing full scope to individuality, suddenly begins to attempt to restrict the freedom of action of the individual; another who, thanks to an unfettered common-sense method of command, has always assured well-timed uniform action, subsequently has recourse to schedules and forms; a third, again, who conquered by a

* Vide Blume, "Strategie," p. 170.

ruthless use of his forces, now preaches the art of avoiding losses. He who has learnt in war that his cavalry could only play a subordinate *rôle* in the issue of a battle, places his future hopes upon great cavalry attacks; having seen the weary and exhausted enemy entrench himself, he now recommends the energetic use of the spade. Every, even the best, thing has its disadvantages; and these are clung to by the "innovators for the sake of innovation," who thus jump from the frying-pan into the fire. Or they think to perceive in everything that fails the germ of some new force, which merely needs stimulating and contains every guarantee of future successes. It thus came to pass that the frontal attack and the direct piercing of the enemy's defences were much lauded after 1870, notwithstanding the fact they did not lead to victory on any of the battlefields in France. In their restless desires these false prophets lose freedom and impartiality of judgment, and they are the authors of the perverse and sophistical theories of war, which are invariably followed by reverses.

Great wars will, as a rule, bring about changes in warfare, but such must not be intentionally sought after; they will obtrude themselves from simple causes by virtue of their natural necessity. Outflanking attacks, it should be said, must be regarded as the *most effectual*, but not as the *sole* means of victory. Cases will occur where outflanking movements are excluded by natural or artificial obstacles. Entrenched positions between detached forts are always such as cannot be turned, and therefore must be taken.

The attack in front may, under certain circumstances, be unavoidable, but this does not mean that the entire front must be attacked with equal energy at every point, since by so doing, the first principle of all generalship, which is to bring the mass of the forces to bear upon a decisive point, would be violated at once. He who shows himself *equally strong* at all points, is at the same time everywhere *equally weak*. Hence, the serious attack will be made upon one of the flanks, the front meanwhile being kept engaged by fewer troops, as

a decisive success can here be dispensed with. It will seldom be possible before the battle to concentrate the troops which are to deal the decisive blow in front of the wing chosen for this purpose, without its being perceived by the enemy. This will, as a rule, have to be done during the battle. The artillery preparation for the attack has also the object of diverting the enemy's attention from the movements which are proceeding in rear. The concentration of troops for the main blow must not take place till a large number of batteries are in action along the enemy's front, unless it be that, in choosing his position, the enemy had to leave open a number of safe and concealed approaches. The attention of the enemy will become more seriously engaged, the closer the troops operating against his front approach to his position, and the easier it will be to give him the impression that the fighting, which is really only intended to withdraw his attention from the threatened point, is meant to be decisive. But the danger for the troops engaged in this feigned attack grows apace as they come within reach of the enemy, who may resort to counter-strokes, and thus introduce an unexpected element of seriousness into the frontal operations. The remedy recommended to the attacker in such a case, namely, to cause the troops engaged in the frontal attacks to resort to the spade, and to entrench themselves in the face of the enemy, and to present a firm barrier to his attempts, is dangerous in so far that the enemy will soon gather from such precautions that a decisive attack is never meant; but the proposal must, nevertheless, not be rejected unconditionally. A repetition of it may even be necessary, until the troops have advanced close enough to be able to deal the final blow without having to pass an unduly wide open space.

Mobility will serve the defender equally well in the event of a direct attack against a wing as in that of an enveloping attack. If he realises the situation in time, he can frequently reply most effectually by throwing forward that of his wings which is not menaced, rolling up the troops

immediately opposed, and bringing the enemy's main forces to a standstill and throwing them into confusion, while they are still engaged in the process of concentration. The pressure on his other wing thus becoming relaxed, he might act there with similar success, when the result would be brilliant indeed. But as in the case of a counter-stroke to an enveloping attack, this requires great vigour and plenty of resolution.

The attack upon a wing, if successful, will generally assume the form of an enveloping movement in the further course of the fighting, because the impulse to roll up the enemy is quite as natural for the attacker as the tendency of the defeated wing to seek protection by drawing closer to the centre. The attacker thus gains the requisite space for an enveloping manœuvre, which he lacked in the beginning.

The attack on a wing will, therefore, be of more frequent occurrence in the wars of the future than the attack upon the centre. The latter, the result of which, where it succeeds, is penetration of the enemy's lines and dispersion of his forces, has nevertheless a hard struggle with the natural strength of a frontal line of defence. As we advance we shall become more and more enveloped by our opponent, and this, considering the great range of our modern weapons, means more than it did in the days of Napoleon. In any case the penetration must be made in proper breadth, the enemy's wings being kept sufficiently employed. This form of attack is compared to a "wedge" driven into the enemy's position, but the simile is no longer applicable, as an insignificant wedge would be pierced from all directions by the fire of the defence, and be speedily shattered. The penetration into the centre of a position demands many and good troops, as well as an iron will, which does not shrink from great bloodshed. In future it will not resemble an attack, but will rather be a gradual worming through the enemy's lines, interrupted by pauses, and resumed again by fresh troops. In this operation, every step gained must be secured during the pauses by earthworks, so that, so to say,

position advances against position. Great frontal attacks will in the future all be of a similar character, and extend over several days. The losses thereby caused can easily be imagined. Episodes like those from August 14 to 18, 1870, may be expected to occur in series.

But the greater the crisis the more important must be the success for him who is fortunate enough to emerge from it. In spite of the sacrifices which it demands, the great decisive battle must, in the future as hitherto, be aimed at; and there is no greater wisdom in war than to put forth all physical and moral force to bring it to a successful issue. With the triumph upon the battlefield predominance throughout the whole theatre of war is assured. All doubtful points are solved at a stroke, and we become masters of the situation.

11. *Pursuit; Exploitation of Victory; Retreat.*

That both attacker and defender are often obliged during the battle to separate themselves with the bulk of their armies from their natural lines of retreat, is of less significance than a false theory of war would have us believe. Besides, the present great mobility of armies permits of the ways of safety being regained without much difficulty. To be cut off from the lines of retreat is only serious when a reverse is followed by an immediate pursuit on the part of the victor.

This *immediate pursuit* has not only nearly always not taken place in late wars, but it lies in the nature of the modern battle that it will, as a rule, be absent.

The vast dimensions of the fields of battle, the disruption of the whole struggle into a number of isolated actions and engagements, and the distance separating friend from foe owing to the effect of modern weapons, obstruct a general survey of the whole situation to such an extent that on the evening of the decisive day the commander-in-chief will rarely be able to appreciate correctly the general issue. The fear of a return blow provoked by premature pursuit, and of

losing the fruits of victory in the endeavour to make it more complete, will always restrain him. Much is already gained by quitting the field of battle with the knowledge of a victory gained, but the situation will not be completely cleared up till the retreat of the defeated army becomes an accomplished fact.

And so, *under ordinary circumstances*, the day after the battle will dawn before the atmosphere becomes clear enough to enable the supreme authorities to issue fresh orders. But then it is too late for a close pursuit; and, on the other hand, the supreme command alone is competent to organise a pursuit immediately from the battlefield.

Every battle entails extreme excitement, and the utmost strain of all the intellectual and physical forces. *A state of exhaustion accordingly follows as a natural consequence.* After a victory, moreover, there is a feeling that further sacrifices are purposeless, or that they would not be sufficiently recompensed by the probable additional results.

Each of the bodies of troops standing side by side in a line of battle will thus, as a rule, wait for the other to commence the pursuit, even though the necessity for it is fully recognised. Each is, as has already been shown, inclined to believe that it has so far performed the greatest share of the common toil and borne the brunt of the day. Each considers its own danger to be the greatest.

The form of the successful enveloping attack, moreover, brings it about that the troops converging upon one point become more and more mixed up. The greatest variety of units becomes mingled like the coloured glass in a kaleidoscope. And this will be so all the more in proportion as the troops show themselves braver and the deeper they succeed in penetrating. It is rare to find at the close of a battle compact bodies of troops in the first line, ready to execute orders. Fresh troops, who have not yet been engaged, will only in exceptional cases come up in time, and those lying farther back will have seen too little to know the direction in which they should pursue.

For that reason we find no immediate pursuit from the battlefield after most of the great battles of the last wars.

The last instances of brilliant pursuits undertaken straight from the battlefield all date from the Napoleonic period. The times of Frederick show but few examples. After Mollwitz, Hohenfriedberg and Czaslau, no pursuit took place; after Rossbach and Leuthen it did take place, but not, according to our ideas, to a sufficient extent. The opponents of the Great King allowed him to slip away at Kolin, at Hochkirch, and at Kunersdof. This was partly due to the unwieldiness of the battle formations, which recognised the employment of an entire army in compact formation as the only practicable measure, and to set a whole army in motion for the pursuit was certainly a difficult matter. The whole conception of the science of war, moreover, was at fault.

The idea of constant consistency in acting had not reached the present state of development, and the conviction of the importance of the rapid and logical sequence of the several operations was still wanting. A certain chivalrous *laisser-faire* ruled the day, and though sanguinary battles were fought at considerable intervals, affairs on the whole were not conducted with anything like the present strictly professional seriousness.

Clausewitz says: "In former wars, which were undertaken upon a smaller scale and moved within a narrow circle, there arose in many points, and more especially in the matter of the pursuit, an unnecessary conventional limitation. The idea and the honour of victory appeared to the commanders to be so much the chief thing, that they thought less of the actual annihilation of the enemy's forces; this annihilation appeared to them to be only one of many means of success of war, not even the chief, let alone the one essential, means. They were the more ready to sheath their sword as soon as their adversary had lowered his. Nothing appeared to them to be more natural than to stop the battle as soon as it was decided, all further bloodshed appearing to them superfluous

cruelty. If this false philosophy did not constitute the basis of all their resolutions, it still established the state of mind in which the idea of the exhaustion of all the forces and the physical impossibility of continuing the battle was readily entertained and allowed full sway."

All this was changed under Napoleon, when war made proper use of all natural resources, when the independence of the several parts of an army and of their commanders increased, and the Emperor aimed at annihilating his adversaries, and completed his victories by relentless pursuit. His *chef d'œuvre* in this respect was in the year 1806, when the advance to Lübeck on one side, and to the banks of the Vistula on the other, was nothing but a chase after the fugitive *débris* of an army. No one profited more by this lesson than his bitterest adversary, Blücher, whom he had chased without mercy as far as Lübeck, and who subsequently paid back in the same coin. The pursuit after the battle on the Katzbach is worthy of comparison with the best feats of Napoleon; and it is one of those caprices of fortune that the Emperor's last battle, Waterloo, became for him an annihilating defeat, because Blücher understood how to follow up the victory by a prompt and unrelenting pursuit.

But we must not forget that though in that period, war had shaken off its former fetters, the armament of the troops remained the same. Battles were fought out to within short distances. When, in our days, the victorious infantry, after heavy losses, rushes into the enemy's position, it will seldom find more remaining than the dead and wounded, whom he has left behind him. Only the fire poured upon it from afar, from a range of hills, a wood, or a village, and the activity displayed by the enemy's artillery covering the retreat, will indicate the direction in which he has disappeared. In villages the troops come to close quarters, but the scenes of slaughter enacted there only affect a small portion of the troops.

Even in our days, the pursuit can be carried on by men and horses only, but the fire of the enemy's artillery

endeavouring to check the pursuit, reaches three times as far as formerly. The distance to be covered before the defeated enemy can be caught up is also three times as great as formerly. So long as we are still able from our original positions to reach the enemy with our fire, we do not move, in order to profit by our fire to the last. This circumstance, the great dispersion of all our infantry, and the confusion created by our outflanking attacks, explain how it happened that at Königgrätz part of the defeated army could escape over the bridge of Pardubitz by making a flank march fourteen miles long, as also the fact that after the great battles of 1870–71 immediate pursuit did not ensue.

But we must not fail to acknowledge that yet another cause has exercised its influence to prevent the success of a battle from being fully exploited. In the late wars we have carried out indefatigably the great enterprises ordered by the supreme authorities with a view to the attainment of their objects. Their strategical conceptions were realised at Metz, at Sedan, and at Paris to the fullest extent, and with the most extraordinary success. Yet our mode of warfare was distinguished by a trait of dignified self-conscious serenity, and there was a lack of all passionateness, such as, for instance, characterised the conduct of Napoleon after his victories. He was imbued with hatred, and this sentiment impelled him to exploit his successes so inexorably. The instinct of destruction, which held demoniacal sway over the hearts of the greatest generals, and impelled them to engage personally in the fray, carried pursuit to extremes. These pursuits will be revived when our mode of warfare becomes more passionate, while, at the same time, the old deliberation remains. In the late wars, at decisive moments when more might have been accomplished, humanity awoke in us the feeling, "Enough has been attained." If we replace such sentiments by hatred and lust of destruction, brilliant and immediate pursuits may still be rare in the future, but they will not be regularly excluded.

Blücher's order after the battle on the Katzbach runs: "It

is not sufficient to be victorious, we must also know how to turn the victory to account. If we do not come to grips with the enemy, he will, of course, rally, and we shall have to attain by a fresh battle what we can gain by this one, if we act with energy." The nature and value of the pursuit are here both aptly described. Never can laurels be more easily plucked than after a victorious battle, when the enemy, overcome by the feeling of weakness, gives up for the moment all resistance, in order to save what may still be saved.

But this feeling will certainly not fill the breasts of the retreating combatants after every affair which we call a victory. We Germans should have beaten a retreat homewards, perfectly broken and disheartened, if we had entertained the emotion, demanded by the rules of war, after every engagement which in French accounts of the war is recorded as "*victoire*." Between a victory and a victory there is often a great difference, although we are accustomed always to attach the one meaning to the word. We want another Bülow to find for us words to denote the fine distinction between the simple dislodgment of the enemy and his annihilation. Frequently we have only *prevailed on* the enemy to retire from the field of battle, not compelled him, and yet, according to old usage, we may rightly claim to have been victorious. After such victories a pursuit would, however, generally mean merely a renewal of the deadly struggle.

The true test is the extent to which the dejection born of defeat has spread in the retiring army. Only when that feeling pervades down to the private soldier, pursuit promises really substantial results. Even Napoleon could not pursue in his accustomed way after the battle of Gross-Goerschen, or even after that of Bautzen, although he had been victorious.

Pursuit is only possible after unmistakable victories.

But here, too, special provisions are necessary. Written orders to pursue, such as came in vogue during the last war, will usually be without effect. The general, after issuing

them, returns to his headquarters, whilst his orderly officers ride off into the darkness of the night. They have to search for some time before finding the army corps headquarters, which, after the confusion of the battle, are hard to discover. The general in command discharges the duty of doing his utmost by sending a fresh order to the most advanced of his divisions. Again, an orderly starts on a ride into the night. By the time that morning dawns, the document reaches the advance guard, which with difficulty has got together some wood and provisions, and is preparing to cook, and is now, without delay, to go in pursuit. But the already somewhat old date of the order weakens its effect. The only immediate result generally is, that the outpost squadrons are roused earlier than originally intended, and are launched forth against the enemy. They have not ridden far, when they are checked by the enemy's stragglers, by ruined bridges or other impediments. Soon after the main body follows, and its arrival puts down further resistance. The most favourable result is that a regular day's march forward has been made, followed by a halt.* The enemy's stragglers have certainly been caught, and a certain amount of booty has been taken, but a destructive pursuit has not taken place.

This is no fanciful description, but a reality which was ofttimes repeated in the last war.

Nothing but a passion for war can animate the pursuit properly. Personal intervention is necessary, and that, too, on the part of the supreme commander himself immediately after the battle. Only when he in person leads on to the pursuit any battalions or squadrons still fresh, accompanies them late into the night and directs them, can any considerable result be looked for with certainty.

We know the motives which lend to defeated troops an often quite unexpected marching capacity.† Like motives being absent in the case of the victor, the impelling energy

* Victorious troops should pursue the retreating enemy on the day after the battle for a distance of at least some twenty miles, as was ordered by General von Goeben after the battle of St. Quentin.

† Vide p. 223.

must come from above, otherwise the fleeing enemy will never be caught.

Only when the forces have been properly husbanded, and the victory was not purchased too dearly, means of pursuit will be available. They must all be held in readiness towards the end of the battle. The general, constantly absorbed by the pressing cares of the moment, is apt to overlook this point. A proposal has lately been made to charge a senior officer of the general staff with the special duty of making these preparations during the battle, similar to our recommendation in regard to intelligence duties.* That certainly sounds reasonable, but as that officer cannot, of course, be entrusted with the disposition of bodies of troops of any magnitude, it follows that his advice will not avail till it has been accepted and sanctioned by the commander-in-chief. The latter is the lever which sets all the machinery of the pursuit in motion.

The cavalry especially must be brought into play. Its commanders are, in the pursuit, the general's principal assistants. Cavalry more particularly should consider it a duty to act on its own initiative in the last phase of a battle if no orders are received from superior authority. If its chances of success are now greatly impeded during the progress of a battle, its disabilities frequently disappear at the close. The energy and order of the enemy's infantry have been destroyed, its ammunition supply has become exhausted. The necessity of following in the general retreat soon compels them to forsake the shelter of casual cover. Great cavalry attacks upon the retiring hosts may yield very important results. But the enemy's artillery, which is covering the retreat, must also be crushed, for which purpose the pursuing cavalry must be accompanied by a large number of batteries. The horse-artillery of the cavalry divisions halting behind the line of battle, will, generally, have already been in action. It is accordingly necessary to withdraw them, and renew their ammunition supply, or to render a number

* Vide p. 100.

of other batteries available. All these measures must be thought of beforehand, as otherwise their execution will be delayed.

The infantry is already pressing the enemy closely, but it is broken up, and is hard to control. Even if a few compact bodies are close at hand, they will rarely belong to the same organisation and will be incapable of producing the effect of an original formation. As, however, just then rapid action is more essential than great strength, this is the moment in which we ought not to hesitate to employ all available troops, wherever and however obtained, without regard to their permanent organisation.

If the enemy is pursued upon a single road, he can always bar it, if he has only a few troops capable of fighting. Hence it is necessary to begin the pursuit at once, in proper breadth.

Thorough exploitation of the victory must go hand in hand with the harvest of *immediate* results.

If the late wars were poor in really vigorous pursuits direct from the battlefield, the victories were nevertheless always turned to good account in another form, since the end of each battle became the starting point for fresh operations on a large scale. The result of a battle was entered at once in the strategical problem as a new factor, and a fresh account was opened. The results were less immediate as those of a prompt pursuit, but they were more far-reaching, and will always be of greater importance. Though the fruits to be gathered immediately after a battle may escape the victor, yet he secures the richer harvest, which arises from the alteration in his favour of the balance of strength in the strategical situation. Such results are those assured by greater freedom of movement, a growth of confidence, a consciousness of superiority, and confirmed resolution. The following morning may pass by unused, provided that the following evening brings an energetic resumption of operations, directed towards new aims and objects.

The best instance of profiting generally by a victory in

this manner is given by that of August 19, 1870, the day after the decisive struggle of Gravelotte-St. Privat. There, too, the first hours passed by without complete appreciation of the situation. The moment for a pursuit had long gone by, even if the close proximity of the fortress had not excluded it. But as early as mid-day fresh orders were issued, which no longer dealt with the immediate consequences of the battle, but concerned the distant future. One portion of the army was told off to shut up the defeated enemy in Metz; another was, without delay, set in motion towards the West; a new army was formed and provided with an independent staff, including the requisite administrative services. Not a single day was lost in furthering the main object of the war. This certainly was the best way to profit by the victory just gained.

A victor can immediately after a battle turn his thought to his most important interests. He possesses at that moment the greatest independence of the will of the enemy, so as to be able to follow up the aims he has set before him with unclogged energy. Such a happy situation, as soon as realised, must not remain for a single hour without being turned to account. In the moments following a victorious battle the great joy over the success gained is apt to make us forget that in a war the future always has greater claims than the past; but that is the very moment in which the supreme military authority should display the utmost activity. By firing salutes and celebrating thanksgiving services on the morrow of a battle many a general has lost the fruits of the victory thus being celebrated.

The vanquished is in quite a different position. He sees himself compelled to drop for the time being all his projects in order to provide for his safety in the first place, and therein lies, at that moment, his greatest weakness. Retreat for him means abandoning the original object in view in favour of seeking safety.* The defeated enemy has abandoned

* We may not, of course, include here a voluntary retirement, made in order to wait for more favourable circumstances. We are here speaking principally of enforced retreat.

the battlefield under the protection of his artillery. If, as happened at Gross-Goerschen, he has large numbers of good cavalry to launch upon the enemy, his first most difficult steps will be facilitated considerably. Everything depends at first upon putting some distance between himself and the victor, in order that the latter may not constantly press him. We know that strong rearguards with many batteries are the best means of gaining a start. As, however, the enemy is superior in numbers, it is seldom that anything can be wrung from him by force. Recourse must therefore be had to deception wherever an opportunity offers. The "eccentric" retreat, which is so often objected to as a radical fault, is the best means for this purpose. If the enemy fails to see clearly the direction in which he must pursue most vigorously, the pursuit will soon flag. He will be baffled; the fact that intelligence comes simultaneously from different directions makes it much harder to unravel than would be the case if the pursuer had the retiring enemy before him on only a single road. It is a matter of history that the great Army of the Loire, after the second battle of Orleans in December, 1870, executed an "eccentric" retreat. After the victors had cut into this army, and had taken Orleans, they found the enemy before them to the south, in the direction of Vierzon; prisoners of the French 15th, 16th, and 18th Corps were brought in. But the enemy was also met with down the Loire, near Beaugency, and it was learnt that his 15th, 16th, and 17th Corps had retired there, and that, moreover, they had been considerably reinforced. Up the Loire, close to Gien, the enemy was also met with in force, and soldiers of the 15th, 16th, 18th and 20th Army Corps of the Republic were encountered. It thus appeared as though all the various parts of the enemy's army had become mixed up together, and thus it was certainly hard to answer the question in what direction the pursuit should be undertaken. In spite of their victory the situation of the Germans was not without difficulty. The original intention to advance to Bourges and Nevers was abandoned as soon as the resistance which General

Chanzy offered at Beaugency was more obstinate than was at first supposed would be the case. Meanwhile General Bourbaki escaped attack, and soon after was able to move off to the east of France with his freshly reinforced army.

The "eccentric" retreat brings the retiring troops upon a larger number of roads and facilitates their escape, though it certainly always suffers from one inconvenience. The battle has just proved that the united forces were not a match for the enemy. And now they are separated. A successful resistance, then, is inconceivable. But it very frequently happens that it is not desired to fight during retreat, and that the retiring army is rather anxious to avoid all fighting. *In that case the concentration of forces is not required*, and all the advantages of separation can rightly be enjoyed to the full. Their subsequent reunion, as soon as the enemy desists from the pursuit, must, however, always be kept in view. General d'Aurelle de Paladines, who had ordered the "eccentric" retreat at Orleans, also planned to unite his whole army again on the Sauldre. He could certainly not have effected it there, but he could possibly have done it behind the Cher or the Indre if his recall had not prevented it. Frederick the Great also made occasional use of the "eccentric" retreat; once in the year 1757, although not successfully on that occasion.

Only when it is hoped to fight a successful engagement on the retreat is it necessary to keep all the forces together.

But even while retiring in a single direction it will also be possible to deceive the pursuer. Positions at one side of the road may attract him and cause him to deploy in a wrong direction, whereby much time will be gained, which is the essence of every plan of retreat. Long-range weapons favour ventures of that description. A hail of projectiles pouring down upon him from a great distance may cause the enemy to hesitate or to deploy in force, the troops which have caused his dismay having time to withdraw to a greater distance. Flanking positions of all kinds can be turned to

account, and so enable the retiring combatant to gain time, if only he be clever and enterprising.

The first direction of a retreat is, as a rule, imposed by necessity. The defeated army chooses the roads upon which it can most readily escape from the enemy. The first necessity is to rally the troops and restore order. As soon as the general has regained some control over the fleeing masses, he will guide them from an enforced into a natural line of retreat. *This latter leads him back to the nearest reinforcements, or to the nearest protection afforded by a redoubt or a fortress.* The troops must be halted as soon as possible, *for long retreats are most demoralising for beaten armies.* A short one is seldom accompanied by great losses, but ennui, exhaustion and despondency, the inevitable concomitants of a protracted retreat, deliver into the victor's hand guns, prisoners, baggage-trains, and supplies of all kinds.

In the case of the vanquished, therefore, everything depends upon renouncing as soon as possible all considerations of personal safety, in order to revert to the great general object. A successful engagement, be it only of secondary importance, will soonest lead up to the turning point, since a success at arms alone wipes out the impression of defeat. The defeated combatant must, therefore, strive to score a success as soon as he again feels himself gathering strength. It depends here much less upon the connection between the battle and the main objects of the war, than upon its being a victory at any price. It is now justifiable to disregard for once generally acknowledged principles, to turn away from the enemy's main army and to devote attention to a minor body, merely because it is hoped to defeat him. Thus did Frederick the Great in August, 1757, when he left the Austrian main army at Zittau to be watched by the faint-hearted Bevern, whilst he himself turned against the less important and less active enemy, the imperial army and the French. He sought the tactical success where he could most easily obtain it, less for the sake of its possible fruits, than for its moral impression upon his army.

Nothing must be left undone to reanimate the shattered *morale* of a retreating army. On the retreat, the influence of the general and the influence of the whole corps of officers has the best chance of proving itself. A retreat applies the severest test to the army in question, as to armies generally. We easily over-estimate its merits as long as everything proceeds favourably, and ascribe to efficiency what should really be attributed to fortunate circumstances. Perseverance, energy, courage, and individual greatness, discipline, bravery and general efficiency can show themselves in their true light after a disaster. Then also a sharp line can be drawn between those who owe their position to the general favour of circumstances, and those who contain within themselves the sources of vigour, resourcefulness, and resolution.

12. *Logical Connection and Sequence in Evolutions and Battle. The Law of Necessity.*

As will already have been gathered from the chapter on pursuits, the greatest strength of an army lies in the absolutely logical sequence of strategical operations as represented in evolution and battle. It was this which dismayed our enemies most in the last campaigns. The "simious agility of the Prussians in 1866" constitutes a great military virtue. In war there must be no holidays. Napoleon I.'s campaigns of 1806 and 1814, and our own in the years 1866 and 1870, are models of logical sequence as yet unequalled. The rapid repetition of blows considerably adds to their weight, since each blow is not merely felt for the moment, but its after-effects last a considerable time. The avalanche increases in size and weight only whilst it is rolling, and this applies to success in war.

The unbroken continuance of the operations demands great intellectual energy on the part of the general. We must remember, that whilst the war lasts, there is for him literally not an hour of rest, not one in which the responsibility weighing upon his shoulders slumbers. The night is as the day, and forms no exception.

The critical spectator is ever ready to condemn any sign of hesitation. He follows the operations only in thought, without personal part in the resulting conflicts, and without feeling the many exciting and troublous doubts. To strike whilst the iron is hot, is a principle applicable in war also. But passionate energy on the part of the general is indispensable for keeping the military operations in perpetual movement; he must have the instinct of Alexander, neither to allow himself nor the enemy a minute's repose, always to strive after greater things, and never to seek the enjoyment of the fruits of past achievements. Of modern captains, Napoleon above all others was animated by an ever impelling impatience. A diplomatist rightly said of him, that the world would have no peace unless he could be made to sleep fourteen hours a day. It is well-known how much work he was capable of doing personally. He passed half the day in the saddle or in his carriage, made all dispositions for his great army, and then dictated to his aides-de-camp ten, twelve, fourteen, or more long letters,* a labour which alone is sufficient to keep a rapid writer fully employed. "I am in most excellent health; I have become stouter since I left," he wrote from Gera to the Empress Josephine on October 13, 1806, at two in the morning, "and yet I manage to do some fifty miles† a day on horseback, and in my carriage. I lie down at eight, and get up again at midnight; I often think that you have not then as yet retired to rest." Such restless activity on the part of the general is the first condition of connected and rapid action in war.

It is most indispensable at the beginning of a war. It then produces such paralysing blows; and if the enemy once loses his head, it is only necessary to see that he does not come to his senses again, in order to become his master. "This moment is the most important of the whole campaign. The Prussians do not expect what we are about to do. They

* His correspondence of September 30, 1806, contains seventeen documents, some of them very lengthy.

† "Vingt à vingt-cinq lieues."

are undone if they hesitate and lose a single day," Napoleon wrote, on October 8, 1806, to Murat, on commencing the operations. And he did not rest from that time until the Prussian armies were destroyed, and he stood on the banks of the Vistula. Nothing but the natural extreme limit of physical strength may cry "halt." This limit is not reached so soon as is ordinarily supposed; both men and horses can endure much. It should never be forgotten, that a blow dealt at the right time with the least vestige of remaining strength may often spare the exertions of a whole campaign and years of bloodshed. Nothing that can be done to-day must, in war, be put off till to-morrow.

But the troops also must labour without ceasing, which is opposed, not merely by bodily fatigue, but, after a prolonged period of toil and hardship, also by that weariness of spirit which destroys all love of action, and gradually pervades all grades and ranks, down to the simple private soldier.

An army which has passed through a series of battles has lost its bravest officers and soldiers. Death reaps its harvest always among the best men. They rush on in front of the rest, and are the first to be carried away by the bullet. They also succumb to disease; for he who is constantly active of his own free will, and always ready to undergo perils and toils, will sooner use himself up to the extreme limits of his powers, than he who lags behind and loves to spare himself. Thus the internal efficiency of troops will gradually decline in the course of an exceptionally hard struggle. Military efficiency is not to be compared with a magnet, whose energy increases by use. Experience only and bodily suppleness increase. Exertion and privations of all kinds, fatiguing marches, and wet nights in bivouac are cheerfully endured for a short time, but not for months together. They damp martial ardour considerably. A few privileged natures escape the effect of such conditions, but not so the mass of men, upon whom a treatise on the theory of war must base its conclusions.

A person without definite knowledge of war is apt to lose

sight of this point. In his imagination the "veterans" advance from one battlefield to another, wreathing their brows with fresh laurels with ever-growing facility. Yet it is impossible to remain always a hero with the same devotion, when battle is an every-day occurrence, when danger cloys by its very monotony, when it comes to footing it on miry roads and to sleeping on the damp sward. Dirt is a dangerous antagonist of all enthusiasm. Ideal and real are far removed from each other in war. The poetical fancies of the novice are not realised. What he sees easy in his soaring visions, in reality takes a very tiresome course, and assumes a terribly sober aspect. The actions and engagements, the thrilling scenes of which he dreams, take place in times of superhuman exertion, which crushes the soul, and scarcely admits a consciousness of the grandeur of the moment. Exhaustion from fatigue so takes possession of all the senses, that they are insusceptible of any impression. Military history tells us how, on the retreat from Jena to Prenzlau, old grenadiers placed their muskets against each other's breasts and fired, simply so as not to be obliged to march any further. If the sufferings of war overcome even the fear of death, how is it possible that they will not subdue the enthusiasm of the novice? We have often heard the exclamation, "One illusion the less" from the mouth of those returned from their first campaign. Even though the young man may perchance go into his first battle full of noble ardour, when military life, embellished by romance, lies as yet unknown before him, though he yearn for dangers and adventures, though he may struggle against the sobering effects of reality, yet time at length will gain the day. All is changed, when he has passed through two or three, or ten and twelve, battles and engagements. His love of adventure will then die down. He has reaped a store of glory and honour, and he is content to have gained recollections for a lifetime, and to be able to feel that he has done his duty in the hour of peril. Involuntarily the wish arises deep down in the breast to bring all this happily back home with him. At the close of a war luckily lived

through unscathed, no one would have a further wish to die for the Fatherland. The generals, too, have their capital—a well-earned reputation—to safeguard; it is natural if they are less daring and less rash than when their hands stretched out to grasp their first laurels.

In the year 1870–71, it was said that "an army can triumph itself to death." This sounds paradoxical, but still bears a germ of truth. *The great majority of men at last tire of war, be it ever so successful.* Civilised nations soon weary of exceptional conditions, such as a war, which disturbs their peaceful development. For the same reason, too, the ancients feared the barbarians, upon whom a break in their ordinary mode of life never made the same deep impression.

If this is felt when the war takes a favourable course, how much quicker will not complete exhaustion of martial ardour ensue upon reverses and retreats.

Nevertheless the continuity of military operations must not be interrupted. To ensure this, the general must exercise an enormous influence upon his army,* all the higher commanders must display great firmness of purpose, with a certain conscious hardness of heart, and a deeply-rooted sense of duty must pervade the troops. The first condition to the obtainment of special efforts is, that the man in authority evinces the courage to demand them of his troops. *Military history teaches us, that those who dare to demand something extraordinary, are fewer than those who make extraordinary efforts when they are demanded of them.* Continuity of action, like the pursuit, depends on the commander-in-chief.

Logical action must spring from judgment. A military adviser to the general can do much to impart it to the opera-

* This, irrespective of the natural influence of personality, is based to a considerable extent upon knowledge of the troops. This circumstance, so often overlooked, deeply concerns the influence of officers upon soldiers. It is a humiliating feeling for the subordinate not to be known; every order is sure of better execution where the opposite is the case. Personal knowledge of each other is accordingly a good bond of union between commanders and troops.

tions. It will, as a rule, result from the *law of necessity*, which greatly controls the course of modern war. A calm mind will soon perceive what is necessary. The great armies of the present, when mobilised, weigh so heavily upon the life of nations, that the instinct of self-preservation demands the speediest possible release from this pressure. Each of the struggling sides has a certaim aim in view which, being attained, will guarantee it peace, and upon which the whole weight of all available armed forces must be directed, in order to reach it in the quickest possible time. We cannot, it is true, go straight to our goal in a direct line, since the chances of war are bound to cause digressions. Each new situation is, in a way, a new embarrassment, which must be got over most advantageously and quickly. This naturally leads to a change of measures on the part of the adversary, and thus the next occasion arises for a change of our own tactics. Whilst we are advancing, pressing the enemy, surrounding and attacking him, we are ever imposing fresh tasks upon ourselves. This restlessly advancing process must never be interrupted, save under extreme pressure of circumstances. A day idly and unprofitably spent, means at least a loss of millions of money. But it is also important that the generals should always bear their main objects in mind, and should take care that among the numberless expedients to which they must have recourse daily, there be none prejudicial to the general aim.

It is advantageous in any, even the most insignificant, engagement, to attack, or to repel an attack, in the direction in which, bearing the general strategical situation in mind, we wish to drive our adversary. If it is merely a question of a battalion or a squadron, still the way to the final goal is facilitated, be it ever so slightly ; while a bloody battle may be without this effect, if it does not respond to the general plan of campaign.

13. *Resolution, Firmness, Initiative, Independence, and Arbitrariness.*

The principles, that in war fighting is everything, that after a victory a vigorous pursuit must be made, in order to turn it to account, that nothing must be allowed to interrupt the forward movement, and similar matters, may be presumed to be already familiar to every soldier, in fact every one knows these things.

If, nevertheless, they are not always observed, this is due, in the first place, to a weakness of purpose, which does not carry out what it considers right. In the field a correct appreciation is only the first step towards solving the problems, whilst, in peace manœuvres, nothing more is frequently demanded than this appreciation. The surmounting of purely personal difficulties, the objections of subordinates, and the influence of highly-placed advisers are often sufficient to prevent many a good resolve being carried into effect, and to cause it to be replaced by a worse. The friction incidental to the movement of troops and the influence of the enemy, often cause the same effect.

But other circumstances are also involved. There are men who set themselves to work with the greatest energy to carry out a plan, once it is formed, but who, nevertheless, find it difficult to form a *resolution*. For the average man it is not easy, especially when he hears other opinions, to be quite clear as to what *he himself intends*. Foreign elements are introduced unconsciously, because the mind is accustomed to a state of dependence. The same defect, for another reason, is frequently found in people of a really high order of intellect. Their mind lacks a certain moderation, in being too exacting in the matter of preliminaries to action. They want to take the offensive, but the preparations for it do not appear to them sufficient. They mean to fight, but they draw up in their minds a rigid plan of the grouping of the forces preceding the battle. But circumstances are never quite as favourable as had been wished, when resolution is

wanting to try fortune even under the *less favourable* conditions. Unsteadiness of purpose makes each individual case appear an exceptional one, to which established principles are inapplicable. It must be realised that the ideal in war will never be attained, that what we desire is never fulfilled as we would have it, that things always take another form than the expected, and that we must accordingly be ever ready to take decisive action, even under conditions only half-way favourable to us.

To arrive at a resolution it is not sufficient to possess strength of character, but a certain practical insight into the imperfection of all human action is also essential. We should be content with attaining our object, even though it is not attained in the way hoped. No one in this life will attain happiness such as his youthful fancy painted as the only possible bliss. It is sufficient to be happy, no matter how.

Moderation furthers resolution.

To clear the ground as to the nature of the resolution to be taken, it is best to proceed by a process of simple, candid and practical self-interrogation. Those men of Jena, when it was a question of facing the French, asked themselves, "Which position conforms best to the demands of military science?" And they propounded ideal positions, which might, perhaps, have suited a scheme for a staff tour, but which were valueless, because they did not respond to the existing military situation. "What will the enemy do? What must, in that case, hurt him most? That is what we shall have to do." This is always the proper line of thought in taking a resolution. Whether the action which is deemed likely to be the most harmful to the enemy is quite *en règle* or not, is perfectly immaterial. We must not try to force the fulfilment of our pet ideas, come what may. Tacticians and strategists having this tendency are very dangerous leaders, particularly when they go so far as to crystallise their scientific convictions into systems. In war there is no saving truth outside which there is no salvation; everything may

be right, and everything may be wrong, according to circumstances.

But in the zeal to inflict injury upon the enemy, a resolution must not aim at the unattainable, though it should venture to go to the extreme limit of the permissible. *In war, nothing rational must be considered impossible as long as it has not been tested; and we may dare everything we believe we can carry out.*

Very frequently the time will be wanting for a methodical interrogatory. Sometimes excitement prohibits it. A resolution then becomes a matter of instinct. During battles and engagements more action springs from the inspiration of the moment than from conscious labour of the brain. We marvel at the faculty of hitting on just the right thing in such spontaneous ideas, and call it genius, or military intuition, or tact. It is simply the faculty of penetrating at a glance a situation as a whole, and, at the same time, all its details.

What is meritorious in all instinctive action is the moral courage to obey such impulses. And yet we have valid reason to place confidence in them, since they express the total sum of judgment, experience, knowledge, and strength of character, an unconscious combination of all intellectual and moral forces. The soldier's spirit within us asserts itself with sovereign freedom, and finds its way more surely than deliberation, which may be led by appearances to false conclusions. Such sudden decisions need no explanation, and frequently bear but ill the justification which history would fain give merely for the sake of embellishment. The example of great captains is instructive on this point. Frederick the Great, after the event, would attribute his much admired resolve to attack the left wing of the Austrians at Leuthen to quite trivial reasons, so that, were we to believe him, all that we most admire would vanish. But the truth of the matter is, that, under the impression which the sight of the enemy made upon him, and without any systematic process of thought, he penetrated the whole situation at a glance.

Scrupulous subsequent reconsideration will seldom better the original resolve. It is even a creation of the moment, in which the whole productive capacity of the man has found its fullest expression. Shakespeare speaks of the "native hue" of a resolution. He knew that it was not an assumed hue.

The danger which threatens the original resolve from subsequent reconsideration, renders it necessary to take some precautions to uphold it. The orders given must be such as to prevent the possibility of wavering. All half-measures are ruinous, simply because one-half takes account of the resolution proper, the other of scruples and doubts which militate against it.

Frequently, purely extraneous motives assume importance. He who takes up a position, in order to fight a decisive battle in it, is ill-advised to occupy a place lying in front of it with strong forces; for, in case these latter are hard pressed by the enemy, the doubt will arise whether the original resolve should be adhered to and the troops in question sacrificed, or if the resolve should be abandoned and the troops rescued. A weak garrison would have avoided this vacillation. The fate of a few companies will exercise no great effect upon the resolutions of the general, though the fate of a regiment or of a brigade may perhaps do so. The sole and ever obvious reason for keeping together the forces is that the general can thus least of all come into conflict with himself. He who does not detach any part of his army to act independently, avoids the risk of being led astray in his intentions by arbitrary acts on its part. Men of weak character and little clearness of view would therefore be well-advised to keep their forces together.

The sharpest test of resolution is given by an *unexpected* engagement occurring during the movements. Even an expected one can lead astray by the force of the impressions produced, and it is not even necessary that it should run counter to our aims. An instructive instance of this may be seen in the action of Villersexel, of January 9, 1871.

General Von Werder before Vesoul, resolved with perfect deliberation, based on a correct appreciation of the situation, to bring the French, as soon as they attempted to march by him along the Oignon upon Belfort, to a standstill, by making an advance with a part of his troops upon Villersexel, whilst his main body was to hurry to the Lisaine to block the road there. Matters developed quite in accordance with this programme. The French came; Villersexel was found by German patrols in the night of January 9 to be strongly occupied. The Fourth Reserve Division of Werder's Army Corps advanced thither; and its advance-guard the next morning drove the enemy out of the little town and took 500 prisoners. Everything went off as well as possible, and according to desire. General Von Werder perceived from the heights of Aillevans the increase of the enemy's forces opposite to Villersexel; the object in view, namely, to check them and to force them to deflect from the line of march towards the East, and deploy in a northerly direction, appeared to have been attained.* This, according to the original plan, was the time for marching off behind the Lisaine, instead of which we see, the same evening and during the night, the whole army corps concentrated towards the battlefield, and, on January 10, early in the morning, even in position for battle at Aillevans and Longevelle, in the vicinity of Villersexel. This instance shows what an attraction an action exercises even upon a chief with fixed aims; and we have already pointed out that, in fact, the tactical decision, when once on foot, should, without question, take first place.† Exceptional cases, like the one before us, which are always determined by the consideration of the relation of the forces to the object in view,‡ are very rare and difficult of recognition.

* As a matter of fact the French intended to march up at Villersexel with their front facing north, in order to attack General Von Werder at Vesoul by outflanking his left wing. As, however, this escaped the notice of the Germans, the general could only believe that his advance had checked their movement upon Belfort.

† Vide p. 304.

‡ The cogent reason which might have induced General Von Werder to

The question, whether we are justified in abandoning, for the sake of greater interests, a battle already half won, is hard to answer. It will be all the more painful to do, as we must say to ourselves that the enemy, even when we voluntarily break off the battle and retire, will always claim, with a certain show of reason, the honour of a victory. In such a situation the *firmness* of the general passes through a crisis.

If this can happen when events are propitious, how much more will it not be when affairs take an unfavourable turn? We are forced from our path in spite of ourselves. There is, however, then a way of escape by clearness of judgment. "Let us only revert to our original point of view, with its great and simple object."* Let us recall to our memory what we originally intended, what the object was for which we contended, and thus subordinate all minor incidents to a more powerful aim and tendency.

On receiving the news of the strong resistance, which parts of the Second Army, during their advance upon the Meuse on August 16, 1870, experienced at Vionville, General Von Moltke wrote from Pont à Mousson to the commander-in-chief of that army:

"According to our view, the ruling idea in this campaign is to drive the enemy's main forces, now retreating from Metz, in a northerly direction. The greater the numbers opposing the Third Army Corps to-day, the greater will the success be to-morrow, when the 10th, 3rd, 9th, 8th, 7th Corps, as well as the 12th, will be available against the same forces."

This is a crisis in which the great point of view was

break off the battle and to march away, did not lie in the fact that he had once proposed to fight on the Lisaine; for the chief thing was that the enemy should be beaten off, not where this should be done. But the motive might rather be deduced from the doubt whether, in the country about Villersexel, which did not oppose any great obstacle to the employment of their superior numbers by the French, the decision by arms with all available forces on both sides could have been brought to a successful issue. On the Lisaine, on the other hand, the prospects were more favourable.

* Clausewitz.

adhered to, that it was the original plan for the conduct of the whole campaign to drive the enemy back in a northerly direction and to cut him off from his line of retreat upon Paris.* Starting from this point of view, it was possible to go back to the original plan, the surprising turn of events notwithstanding. It would, perhaps, have been lost, if the authorities had allowed themselves to be nonplussed by the abundance of incidents which marked the course of the battle, by the numbers of the enemy, and by the positions of the various troops.

"Great aims are the soul of war, and what would become of the whole theory of military science, were its great views and rules buried under a mountain of petty difficulties, laboriously dug out from the whole range of possibilities?" †

We have seen, that during military movements the resolution taken must express itself in clear orders, if it is to have the proper effect; and, on the battlefield, it must, moreover, find proper support in the bearing and personal influence of the commander. His conduct there must show his belief in the success of his cause, and must clearly display the confidence that his measures are bound to lead to success. Personal influence is a natural gift, not easily acquired otherwise. Excellent men, though perfectly clear-headed and conscious of their purpose, may lack it. It is, even, a question of the innate gift of command.‡ The contemplation of human nature may suggest a few useful hints. "In the face of the enemy, the soldier is not so machine-like as on parade, and this is as true of the highest commanders as of the private soldier." § Even feigned assurance may be advantageous, whilst a careless word of doubt or fear may easily do the gravest harm. In action, optimists regain the ground which their views have lost on the field of argument.

* Vide pp. 177, 178.

† Clausewitz. Cantonment of Tennstedt, near Weimar, October 12, 1806.

‡ Vide pp. 68, *et seq.*

§ Scharnhorst, "Handbuch für Officiere," iii. pp. 282, 283.

Mephistopheles becomes to us, as to the student, a most excellent tutor:

> An Kühnheit wird's euch auch nicht fehlen,
> Und wenn ihr euch nur selbst vertraut,
> Vertrauen euch die andern Seelen!—*Faust.*

This is no less applicable to the soldier than to the student of medicine. This self-confidence will produce a commander of the right sort. Capable leadership in battle naturally also demands skill in the manœuvring of troops. Undue importance must not be attached to this point, though, on the other hand, entire disregard will certainly avenge itself. Furthermore, the habit of command is essential.

As the sense of responsibility is the bitterest foe of all resolution in war, irresponsible persons are, as a rule, most fertile in ideas. When a young man rides with the staff of a field-marshal, he, in his guilelessness, is apt to form prompt resolutions, and cheerfully to take the most momentous decisions upon his shoulders. As his designs often chance to prove right in practice, he readily believes that he only needs a field-marshal's bâton to be a great general. Prudence however, commands that one should not suppose himself a Napoleon before he has proved himself in practice in a position of responsibility. The burden of responsibility changes all at a stroke, and war then is at once regarded with other eyes. It is as if a yellow-red glass was held before a man's eyes; it then seems to him as though the sky, which just before smiled so serenely upon him, now hung pregnant with thunder over affrighted nature.

The weight of responsibility does not bear the same throughout. It increases with every step higher up the hierarchical ladder, its pressure being felt least on the lower rung. That will be seen especially in an army like our own where the whole corps of officers belongs to the same social stratum and forms an aristocracy of intellect. The lieutenants are naturally the leaders in dash, since they have the early consciousness of their claims to a field-marshal's bâton, without, however, as yet having to bear the burden of

responsibility of the post. They form an element of energy tending upwards, and the same applies to successive steps in rank. In this way an impetus is given to the whole mass. The independence of the lower commanders constitutes a force which cannot be replaced by anything else. It is clear that the machinery of an army must work with greater speed and to better effect, when each component works automatically, than when the impetus is waited for from above.

If an army cultivates the habit of only doing what is ordered, its movements are bound to be somewhat jerky and intermittent. It will experience an interruption on each occasion of unforeseen circumstances occurring, because all concerned will first await the orders of the higher commanders.

The disconnected nature of many of the operations of the French army in 1870 is sufficiently explained by the lack of independence in the lower grades.

In order that the difficult task of the good leading of our great armies may succeed, it is indispensably necessary that the ground for instructions from above should always be prepared by those below. In the late war, we have often had occasion to remark, on the German side, that when orders from head-quarters came to the armies and army corps the first steps for their execution had already been initiated.

The spirit of *initiative* urges to independent action, and makes armies strong. We rightly adhere to the principle that, in the case of an officer who has been guilty of neglect, the excuse that he had received no orders is of no avail. Passive obedience does not satisfy us, not even the mere fulfilment of what was ordered, where an opportunity occurred for doing more. Clausewitz declares it to be a sign of mediocrity to do always only exactly what one's office requires. We call it an incomplete sense of duty. Frederick the Great demanded that every officer should at least prepare himself for the next higher rank. Power

of independent action and the spirit of initiative can be cultivated in no other way.

A corps receives orders to continue the next morning the march already begun. Intelligence is suddenly brought that the wing of the army has unexpectedly come into contact with the enemy. It is probable that the commander-in-chief will abandon the old route and take a new one to the scene of action. Orders, however, have not arrived. In this situation the commanding general decides to place his corps the next morning in a position of readiness, so as to be able to march off in the altered direction, without having to make détours or without losing time. That is initiative.

The commander of artillery whom, in our description of a chance encounter, we made to bring his batteries to the front before receiving orders, and who thus anticipated the wish of his commanding general, also showed initiative. It is no less the property of the commander of the advance-guard who, perceiving the enemy, whom he is observing, to be moving off, promptly attacks him, because he sees how wrong it would be to allow him to escape.

Initiative must not be confused, as is so often done, with simple "go at them." An attack, as a capable soldier of high rank once aptly remarked, may be precisely a proof of want of initiative. That would be so in the case of an advance-guard on the march, if it attacked the enemy, simply because of its commander's inability to come to a clear decision as to what he ought properly to do.

Initiative is the independence, based on intelligence, which prompts an inferior to promote the ends of his leaders.

It can certainly not be denied, that initiative at times becomes an inconvenience, by crossing the views of the higher authorities, and thus depriving them of liberty of action, by the creation of an unalterable situation. In the higher positions especially, careful consideration must precede action, because here a part of an army is involved whose fate bears influence on the whole, which is not so much the case when

the initiative is taken by commanders of inferior rank. But nothing would be more mistaken than antagonism to initiative in the army generally, and an attempt to establish the principle of restraint on the liberty of action of subordinates, because of the remote chance of a mishap. One would thus kill a hundred healthy impulses, to avoid a single mistake, and lose enormously in power. Besides, initiative is already opposed by a sufficiency of powerful enemies. Such are, intellectual laziness, *laisser-faire*, the habit of acting by rote, the fear of responsibility, the habit of the majority of men to allow themselves to be carried by the flow of events, of waiting until these clearly impose upon them the duty of action, instead of acting on their own judgment. These negative forces paralyse, as it is, all power of action. If, in addition, they are favoured by the imposition of restraint on independence, it will not be long before they have choked all life, and the troops have become a soft pulp, which, though easily kneaded by its master will, lacks the elasticity necessary to do great deeds. Initiative can easily be driven out of an army ; but it is extremely difficult, perhaps utterly impossible, to rehabilitate it when once banished. There is a means of preventing possible ill consequences of initiative, that being a uniform training of the faculty of judgment.* This means is quite sufficient, and will not prejudice independence.

A philosopher of modern times informs us : "I have, alas ! too late after the event, learnt to perceive that to do nothing is in very many cases the most effectual, the cheapest, and the least dangerous, in short, the best and cleverest thing to do." For ordinary life this maxim may contain great wisdom, but we must banish it from the military existence. The soldier must perpetually be doing something. The inclination for it will certainly not remain in him unless he is certain to receive thanks, or, at all events, no disapprobation on principle. The highest military authorities must possess a liberal store of generosity in their dealing with the independent actions of

* Vide pp. 167, 168.

their subordinates.* The German authorities in 1870 did not, in the presence of accomplished facts, enter into a lengthy dispute with their authors, but simply took them into their calculations, since they were unalterable. By acting thus they fostered in all their subordinates courage to act independently, as well as assurance in risky undertakings; for each one knew that he would not be left in the lurch, but might consider himself certain of support from above. Thus the strength of the whole army was doubled.

There is no more foolish doctrine than that the general must leave to his fate a subordinate commander, who has, without sanction, involved himself in a ruinous battle. Wherever such a thing happened, except at the bidding of stern necessity, it would be equivalent to fighting against one's own army.

He who allows independence, does not, by any means, by so doing plead the cause of *arbitrariness*. The boundary between them appears to be very indefinite, but can yet be perceived, as soon as the motives for action are closely examined. The verdict must be determined by these, and not by the result, which often depends upon accident. Arbitrariness always springs from egotism, and not from interest for the common cause. Independence derives its justification from the fact that it promotes higher aims, or, at all events, intends to promote them. Where this motive is excluded, and egotism is indulged in for its own sake, it changes into arbitrariness. General Von Manstein's attack at Kolin was an act of arbitrariness; for it was apparent that it could never have served the ends of the war, but only his own glory.

Independence and arbitrariness are in no wise, as is so

* This is also very necessary in peace, when already too many orders are given merely to smoothe the path, and with a view to spectacular effect. But an officer, who, by independent action, spoils the nicely arranged group is often severely snubbed. In consequence of such experiences, he determines for the future to wait for orders, and, by degrees, this disposition becomes habitual. Where independence is lacking in the *lower* ranks, the fault will, as a rule, lie in the higher authorities.

often thought, nearly allied. The first risks the person for the sake of the cause; the second, the cause for the sake of the person. Each is foreign to the other, and it will, therefore, be quite possible to adopt the one to the exclusion of the other.

The resolution is the author of action; Firmness its preserver; Initiative its nutriment; Independence its guard against interruptions; and where these qualities are found, Arbitrariness is unknown, for the former spring from a good, and the latter from an evil disposition.

14. *Particular Conditions Influencing Movement and Battle.*

It has never yet occurred to any one to write a treatise on strategy and tactics for the different seasons of the year, and yet their influence is certainly quite as great as that of ground, which has often been treated at great length.

That evolutions and battles, when rain or thaw has covered the ground a foot deep in mire, and when neither cavalry nor artillery can be employed, except on the roads, will take a different form to that which they take in times when troops can be freely used upon hard and firm soil, is self-evident. Battles, under such conditions, are less decisive in their issue, and more dragging in their course. Impetuous charges are equally impossible as rapid pursuit; defence gains in strength. The tactical efficiency and address of good troops cannot make itself felt to the fullest extent; even bad troops may venture to await their foes firm of foot, and measure their strength with them. The plans, under the influence of such considerations, must become restricted, unless the energy of the commanders and the exertions of the troops can double themselves.

That, however, is not the only consideration. The difference in the length of days, which the various seasons in our latitudes bring with them, influences military operations very greatly. By far the greater part of the work of war can only be carried on by day, in which, as already men-

tioned, we include the dusk.* Accordingly, in the height of summer the day means from 2 A.M. to 10 P.M.; in winter from 7 A.M. to 5 P.M.; twenty hours in the one case, and only ten in the other. But we must remember that, in battle, effect does not advance simply with the time, but increases in a progressive ratio. A victory, which in six hours is only half fought out, can be changed into an annihilating defeat of the enemy, if only two additional hours are gained for continuing the battle.

In winter, marches are always more fatiguing. Not merely do snow and bad roads occasion this, but also the cold, which drains the strength and tires. A man needs more sleep; the start in the morning is delayed, although the troops reach their quarters earlier. Besides this, all must be brought under shelter, and the troops spread further afield, in order to find heatable rooms. Every assembly of troops takes more time, which makes itself doubly felt in the short days. Rapid concentration of troops from great distances is impossible, as are engagements after long marches to the front. More caution must be displayed in separating the troops, and they must be kept closer together, a precaution which again runs counter to the requirement of better accommodation. Cold increases hunger; thus the troops demand an ampler supply of provisions. Warm food is indispensable.

From the increased difficulty of movement, and the shorter working time in winter, it follows that it is scarcely possible to fight out battles on close ground, which usually last very long. Frequently, a thick morning mist, lying over the snow-clad fields, lengthens the night. The days of Le Mans have shown us how difficult it is under such circumstances to drive an obstinate enemy from ground which favours him. The engagements began late. The snow impeded the advance of the lines of skirmishers, darkness supervening put an end to the battle, just when success came in sight and the enemy began to break up. The length of the winter's night rendered it possible for him to rally,

* Vide first note on p. 233.

to take up fresh positions, to bring up reinforcements, and to prepare for resistance on the morrow. The process of destruction on foot in the French army was too frequently interrupted to proceed very fast. In the height of summer the Germans would have completed in three or four days what, in winter, took seven days to accomplish, and the result would have been double.

Wellington, with his memorable saying at Waterloo, "Would that it were night or that the Prussians were here," very aptly expressed the influence of the length of a day upon a battle. Another hour at St. Privat would have much enhanced our success. On the other hand, if we suppose the battle to have taken place on December 18, instead of on August 18, it would be very questionable if it would have been begun even by 12 o'clock noon. Under this supposition the end of the battle would have taken place just at the moment when the attack of the Prussian Guards upon the village of St. Privat had come to a standstill. The battle would have had to be renewed the next morning, but in the meanwhile Marshal Bazaine would have gained time to transfer his intact reserves to his threatened right wing. This would have thereby been very considerably strengthened, and it is uncertain what the further course of the battle would have been.

General von Stiehle, in his excellent treatise upon Kunersdorf,* urges among the causes which led to the loss of the battle, "the great heat and the long summer day." He adds: "How similar would, in all probability, have been the issues of the battles of Torgau and of Kunersdorf, if the former had been fought in August and the latter in November. If, at Kunersdorf, night had set in at 5 P.M., a retreat of the Russians during it is more than probable, or at all events, a concentration upon the *Judenberge*. The operation of General Von Wunsch might then have had its after-effects,† and, in an extreme case, the King would have

* Supplement to *Militair-Wochenblatt* for the first quarter 1860.

† General Von Wunsch advanced, on the order of the King, during the

renewed the battle on the following day from the commanding Grundhaide with the moral impulse of the victory half-won on the previous day."

As the King, had darkness set in at the right moment, could not possibly have thought of continuing the battle after the first important successes, so would Zieten at Torgau not have been able to take, to say nothing of holding, the heights of Siptitz at the Schafteich by daylight, which in the month of August would have prevailed at the time of his attack. The duration of daylight is, accordingly, an important factor in delivering a premeditated battle.

A belated beginning brings only half a success. It is disastrous when a complete decision is aimed at, and can be advantageous if we are satisfied with a partial decision, or feel that our strength is only sufficient for such.

Upon the spirits of the army also the season of the year has a certain effect. On a bright spring morning the troops march more gaily and with greater vigour, than in the summer or on gloomy days of rain.

How much the health of troops is affected by the *weather* needs no mention. A combination of shortness of supplies and of bad weather constitutes an all-destroying force. Especially detrimental are these influences at a time of compulsory inactivity, in camp life, and under similar conditions. In 1870 the chief attention of the supreme authorities of the army before Metz was rightly devoted to this point. The necessity of keeping the soldiers occupied by duty and by labour in the lines of investment was frequently emphasised in the orders issued at the time. In one of them, dated September 9, it is further enjoined:

"Every effort is now to be made to see that the continuous bad weather does not turn out calamitous. Every roof must, therefore, be utilised for quarters, so that the outposts may be relieved from time to time, and may be able to dry their

battle, in the rear of the Russians from Lebus upon Frankfurt on the Oder, took this city, and blocked the bridges of boats there against the flying masses.

clothes by the fire. An unfailing and sufficient supply of food, a resolute will, and the conviction that the enemy fares worse than we—as all the prisoners of war testify—will enable us to overcome even the present hardships."

Movement, as a rule, lessens the influence of bad weather. It works gratefully upon the feelings, by the changes it affords to eye and senses. Every march after a long halt is something invigorating. Considerations of health often render a change of air desirable. Infectious diseases spread less easily, and regularity of bodily activity is beneficial.

What a *rôle* weather can play in fortress warfare, when the wet has turned all trenches into water dykes, or the frost has made the ground so hard that it resists the spade and the pickaxe, is shown by the history of winter sieges, among which we need only mention Sebastopol and Belfort.

A winter campaign is a hard test for any army, and under very unfavourable conditions considerations of preserving the troops may so push those regarding their active employment into the background, that they finally become the chief solicitude of the leaders.

Timely precautions are quite as important as sufficient ones. He who only thinks of them, when their need makes itself felt, will be too late in applying the remedy. But in the general state of uncertainty it is difficult to recognise the right moment for preparation. Neither the duration of a war, nor that of any particular phase, can be foreseen at the commencement. When Frederick the Great, in 1756, crossed into Saxony, he certainly did not expect to remain in the field for a period of seven years. In 1866 men of experience entered upon the campaign in the expectation that the struggle between the two practically equal opponents would spread over several months, possibly even years. Misled by the rapid and victorious course of that campaign, it was expected in 1870 that the army would return home before the winter, an expectation which derived additional strength from the series of important initial victories, though it was not

realised in the end. No one had anticipated the protracted defence of Paris. In September it was scarcely imaginable that our troops would still be outside the walls of the giant city in the following January, and that preparations would have to be made for spending the winter in the field. Similar illusory views obtained in regard to Metz and Belfort. If, however, a general would make provision for every contingency at the very beginning of a campaign, he would soon come to the end of his resources. Sound judgment and exact appreciation of the conditions obtaining on both sides can alone enable him to devise proper measures. As, however, the officials of administrative services cannot be so well informed on all points, the many arrangements necessary to ensure the army being kept in a condition to keep the field cannot be set on foot unless the superior authorities keep in close touch with the services concerned. In view of the vast numbers of combatants it will, moreover, not be possible to procure everything in the course of a war. It is absolutely necessary to keep large reserves of certain articles in times of peace, such as warm winter clothing of uniform pattern, materials for hutting, double tents, &c.* Supplies of all kinds must be forwarded in time to the principal magazines on the lines of communication, so that they may be forthcoming when required. The army administration must not be deterred by the item of cost, money thus spent being equally well invested as funds appropriated for experiments with new inventions, or for *matériel* or fortress construction works.

With the increase in the strength of armies, *attention to health* in war will naturally gain in importance. It is painful to see day after day whole railway trains full of sick being transported to the rear, reserves only slowly coming in, and no effective remedy at hand to stay this steady disintegrating process. Let us only think of Sennacherib's host before Jerusalem. The loss of strength by disease is scarcely credible, but yet one single instance suffices to make one

* Vide p. 254.

believe that it may finally undo all successes. The conditions of health obtaining in the German army in France were quite favourable; no dangerous epidemic broke out; and yet, during the course of the war, 400,000 sick* were obliged to have recourse to the hospitals. The average duration of the absence of the sick from duty has recently been given by a painstaking investigator at about twenty days. The total result in terms of effective service in the ranks is accordingly equivalent to that of twelve complete army corps for roundly three weeks. No remedy must be left untried to counteract this natural dissolving tendency. Climate and the civilisation of the land in which war is waged will necessitate different measures. In a war in the East quite different precautions must be adopted, and considerations of preserving the health of the troops would there play a far more important *rôle* than in a campaign on French or German soil.

Of considerable influence is the melting of the *numerical strength* in war. A battalion which, at the commencement of the campaign, numbers 1000 rifles, sinks at its close to 300. The army corps, in respect of the number of their combatants, become weak divisions, the divisions weak brigades. And yet a definite conception and definite demands upon them are inseparable from their names. A temptation exists for the supreme commanders to reckon simply with corps and divisions, and to assign to them at the end of the war the same tasks as at its beginning. This is favoured by the fact that certain elements never vary. The headquarters of armies and army corps, the number of guns,† and the baggage-train remain the same. The rapid melting away of the forces is shown principally in the infantry, far less in the cavalry and artillery. The weakened infantry must, however, still supply all the necessary detachments and provide for the duties of the service of security within the area of a complete army corps, and thus again loses a greater proportion of

* Besides the 100,000 wounded.

† Accidental losses in action deducted.

its total strength than in the first period of the war. The principal arm loses more and more in its importance. The artillery comes forward the more strikingly. In strengthening this arm, Frederick perceived the only means of balancing the dwindling of the strength of his infantry. "I have considerably increased our artillery, which may remedy the deficiencies of our infantry, whose value can only decrease in proportion to the length of the war," he wrote in the winter of 1758 to Fouquet. But even if the artillery only remains at its original strength, whilst the corps of infantry in the front sink from 25,000 men to 15,000, 12,000, 10,000, and even—as was once the case in 1870—to 7000 combatants, it must, by degrees, be reduced to the *rôle* of a cover for the artillery.

Owing to this, and to the simultaneous loss of martial ardour and enthusiasm,* military operations assume a different character. Whilst the masses so reduced would certainly give a general like Bonaparte an opportunity for exercising surprising dashes, appearing suddenly here, and then disappearing, the conditions I have described make battles generally more feeble and less spirited affairs. We now rather push than strike. The battles become cannonades, which create much noise and expend much powder, keep the field clear of corpses, and end without any real result. The change is, it is true, concealed from the home country; for the consequences of less energetic action awakes in those participating the need of magnifying their deeds by highly coloured descriptions. The longer the war lasts, the more vivid is this colouring, so that the country gets in the glowing newspaper accounts a sort of equivalent for unaccomplished achievements. On the Lisaine the total losses of the whole of Werder's corps during the three days' battle were only equal to those of each of the three brigades of infantry of the 3rd Army Corps at Vionville within eight hours, and were below the losses of the 38th Brigade, 5000 men strong, and exactly equal to those of the 16th Infantry Regiment in a single

* Vide p. 378.

hour. In spite of this, the battle on the Lisaine was, in the daily papers, described as not less bloody and exciting than that of Vionville. Months had elapsed, which had lowered the demands made upon the soldiers and increased the self-content of the nation.

An eye-witness must be struck by the gradual loss of energy in the conduct of all operations. It is a factor with which we must reckon, and which, when not counterbalanced by the intervention of some powerful personal influence, renders care necessary in the management of the troops.

A remarkable testimony to this is given in an order of Prince Frederick Charles during the Loire campaign, issued on December 10, 1870; and it may find a place here because such exceptional conditions seldom receive proper notice.

"The engagements of the last few days," the order runs, "and the repeated attempts of the enemy to fight against us in open country with augmented artillery, cause me to draw the attention of general officers to the fact that ineffectual artillery-fire at ranges exceeding 2000 metres must be strongly discountenanced; otherwise, in spite of all our efforts, the supply of ammunition cannot be maintained.

"Where the enemy, as he has hitherto done, occasionally takes the offensive against us, we shall obtain the best effect from our fire by appropriate use of the ground, and, in the case of the artillery, rapid fire must not be resorted to except at the most propitious moment.

"If, on the other hand, the enemy, as is his wont, only uses artillery fire along our front and awaits our attack, it will be advisable for our front line to use its artillery very sparingly, until one of the enemy's wings has been outflanked at not more than about a mile. A lively artillery fire, in order to induce the enemy to undertake counter offensive movements against our outflanking movement, will then be quite in order.

"In conjunction with such outflanking movements, our numerous cavalry with horse artillery may occasionally make

a demonstration in the enemy's rear, and thus cause confusion in his ranks.

"If the enemy's attacks have been thus repelled with loss, our real offensive with infantry can then take place, so as to compel the enemy to retire.

"In this way, useless actions, which weary the troops, cause us unnecessary losses, and consume our valuable ammunition, will be avoided."

The peculiar rules of conduct for the three arms dictated in this order, the sparing, yet not neglecting to use, the weak infantry, render it a model for all future fighting in a similar situation.

The *qualities of the enemy* combated influence also, in no small degree, the fighting methods of the opposing troops. Even the best army, which for a long time only fights inferior enemies, suffers in efficiency. The experience of war gained in Algiers, Eastern Asia and Mexico, of which the French troops in 1870 were so proud, did not show to advantage in the war against Germany. It was proved that the military excursions across the ocean had only produced routine methods in the minor operations of war which were practically valueless for European conditions, whilst on the other hand they had led an army, good in other respects, to over-estimate its powers and to adopt many pernicious habits. Moreover, by easily gained victories over undisciplined bands, this army became an entire stranger to serious opposition, and to consistent and vigorous action on the part of its adversaries. It is also a most peculiar fact, that soldiers who have to make but little sacrifices for their successes, show a growing tendency to shirk them. The fewer men fall, the more precious does each consider his own life, and the more does the inclination to die for the Fatherland recede. The bloody scenes of universal perdition, as displayed at Vionville and St. Privat, lowered in the eyes of each the value of his own person. The greater excitement, too, stimulated the exertion of all energy, self-sacrifice, and contempt of death. When, later on, we began to take things

more easily in the war, the whole manner of action became less vigorous. We, too, relaxed after a few months of dealing with only the raw troops of the September Republic, over whom we so frequently triumphed with but little effort. When towards the end a strong character in the enemy's army, and peculiar circumstances favourable to it, brought about a really tough resistance at Le Mans, the work seemed hard to our troops. It is the best evidence of their internal efficiency that they did not on this occasion give way.

The most exacting task that can be imposed upon an army is to enter upon a second campaign against fresh enemies immediately after one in which its moral energies have been partially consumed. However fortunate Napoleon's operations against the Prussians and Saxons in the autumn of 1806 had been, he nevertheless experienced a check, when, in the winter, he encountered the Russians and the corps of General de L'Estocq, which had not previously been in action. We, too, in 1870, felt uncomfortable when the first brilliant epoch of the war against the French Empire was closely followed by a second against the Republic.* Every page in history bears witness to the great impression produced by the appearance of fresh friendly troops upon the field, when all have become tired and weary by a protracted struggle, and the appearance of new enemies upon the theatre of war produces an effect no less powerful. Much, of course, depends upon the state of feeling in which the second period is entered upon. If it comes unforeseen, if the army has cradled itself in the sweet assurance that it might rest upon its laurels, the victory over self will become all the harder. If, on the other hand, the necessity of turning upon a second enemy after humbling the first has, from the first, become clearly apparent, the second step has, to a certain extent, been prepared for. The amount of the losses which the first has cost is, of course, also of influence. An army which has

* Many of the protests against Gambetta's action, uttered at the time, may certainly be attributed to this same cause.

achieved great results with but moderate sacrifices, like that of Napoleon in 1805, will even derive force from its experiences. But, generally speaking, it is an illusion to assume it possible with the same forces to emerge from a costly campaign, only to engage immediately in another with the same energy. Even complete triumphant success in the first struggle has exhausted the energies, damped the martial ardour of the troops, and quenched their thirst for honour and glory.

15. *The Influence of Fortresses.*

Fortress warfare falls within the scope of the present treatise only in so far as it affects warfare generally.

We will nevertheless take a cursory view of this type of operations, which are evidently now at the parting of the ways. It must be admitted at once that speculation and a few obsolete examples can be our only guide, since we still lack the experience of a great regular siege conducted with all modern appliances. The siege of Paris was merely an investment aided by bombardment. In the case of Belfort the forces and means available, both inside and out, were small and inadequate. We may, however, attain to fairly accurate views by a close study of the effects of weapons, careful analysis of recognised general principles, and a comparison with examples of earlier times.

The besieging army in the first instance encircles the place to be taken and invests it completely, so as to prevent reinforcements and supplies reaching it from outside. The next step is to confine the defender to the enceinte of the fortress. The defender having already cannonaded the forces advancing to the attack, his camps, and cantonments within a radius of from 8 to 10 kilometres, now proceeds to a stubborn defence of the outlying ground. Here he has fortified suitable localities, constructed trenches and batteries, and thus improvised a series of positions, under the protection of the permanent outworks, which cannot be taken by ordinary means. The assailant must gain room for the deployment of

his siege *matériel* within effective range of the fortress, while the defender disputes the same ground, and both contend for a time for the theatre of the real duel. The former brings up the heavy artillery of his field army, perhaps even the more mobile components of his siege park, and thus supports the action of his infantry by a powerful artillery fire. Hot preliminary engagements ensue, in which the assailant must be victorious before he can proceed to the main act, which culminates in the development of the highest possible artillery effect.

In the meantime a decision has been arrived at as to the front of the fortress upon which a decisive attack is to be directed. A tentative choice may have already been made in time of peace, but unexpected circumstances, or surprising measures taken by the defender, may always render modifications a necessity.

A front, upon which success seems to be assured, and against which the movement of the cumbrous *matériel* requisite is facilitated by the situation of railways and roads,* is selected for the assault.† Against this front the siege park is concentrated out of range of the guns of the fortress. In the most favourable cases the siege park is already in transit to the theatre of the operations, otherwise it must be requisitioned from the home arsenals. The sheltering of the troops, the preparations for the construction of the batteries, and the laying down of tracks and tramways for the movement of siege guns and the supply of ammunition, take up much time, which the assailant utilises to fortify the lines of investment nearest the fortress. When a sufficient supply of guns and ammunition is on hand, and the receipt of supplemental supplies is assured, the batteries are constructed, those under cover by day, those within sight of the enemy during the night preceding the opening of the bombardment. The object is to gain immediate superiority of fire over that of the fortress, which may necessitate the employment of the entire available siege *matériel.*

* Vide p. 242.

† Secondary attacks upon adjoining fronts will often be necessary.

The *rôle* of the infantry now becomes a more passive one. For the moment their principal task consists in protecting the siege batteries against sorties and annoyance by hostile rifle fire, for which purpose they take up entrenched positions under the guns of the fortress. The shielded guns and batteries take up the gauntlet at once. These enjoy the advantage of being always ready to fire, their mountings taking up the recoil, thus enabling them to reply with rapid fire. On the ramparts of obsolete works of earth and stone the defender will feel himself cramped, indifferently protected, and too much exposed to the enemy's view, besides offering too prominent a target, and being apt to be enfiladed and subjected to bombardment from several sides. This may induce him to move his guns into the open, drawing on his reserves, and establishing his guns in long lines of batteries in the intervals between the outworks. * He there accepts battle on ground prepared by the construction of bombproofs for the infantry, artillery, and ammunition, and an artillery duel ensues on the grandest scale.

All further steps depend upon the issue here.†

If the attacker is defeated, if he is unable to restore the battle by bringing up his reserves of guns and turn it in his favour, the siege will be interrupted and reduced to an investment, until fresh resources have been brought up from the base of operations.

If the defender is worsted, he will not await complete annihilation. He may, possibly, have had the opportunity during the progress of the struggle to establish a fresh line of strong defences between the outlying forts and the main

* We here mean principally advanced permanent redoubts. Provisional works, such as played a prominent part at Silistria, Sebastopol, and even at Belfort, are now deficient in the requisite power of resistance in face of modern guns and projectiles, unless time admits of their being thoroughly improved.

† The infantry may not, however, be idle during the decisive artillery phase, but must steadily work its way forward, supported by the engineers and take part in the work of destroying the opposing batteries, though its *rôle* just then is decidedly inferior to that of the artillery.

works of the fortress, into which he retires for a continuance of the defence. Or he may hide his guns for the time being. He then permits the attacker to push up his trenches against the stronghold, and only takes up to the artillery fight a second time, when the enemy has come so close to the main works as to be cramped for room. The advantage, too, of outflanking—at all events, at a short distance—is here lost to the attacker, whereas the defender will profit from lateral fronts and works. If, however, he has once been worsted in the first artillery battle, he will but rarely win the second, for in the course of the siege his losses in guns will steadily increase.

From the time of the second bombardment the fall of the fortress becomes merely a question of time. Although the engineer of the attack has still to beat his comrade of the defence, destroy armoured works still capable of resistance by explosives, where bombardment alone has failed, make breaches effected by artillery and explosives practicable, or supply the means for the passage of the ditches of the fortress, generally speaking, however, the fate of the place is sealed in the absence of relief from outside.

A tendency seems to manifest itself at present to overrate the destructive power of artillery, particularly since high explosives, surpassing by far the effects of powder, appear in growing numbers and ever-increasing force, which act, in fact, as powerful mines. Wherever they strike, sand, *débris* and dust, mingled with vapour, ascend skyward in a gigantic column. Shelters are destroyed, and bombproof ceilings are pierced, which a few years ago were still considered invulnerable. Earth cover, once deemed indestructible, is furrowed up and shattered. An obsolete fort would resemble a heap of ruins after a brief bombardment. The moral effect of incessant detonations, too, is extraordinary.

But in spite of improved means of attack the defence must be undertaken and maintained to the bitter end.

Fortifications favoured by nature, hewn out of the rock and situated on ground which makes the construction of

batteries and trenches extremely difficult, are not the only ones which can hold out, but the engineer has also found means to enable places not favoured thus by nature to defy the guns of an assailant. He has made provision for a stouter overhead cover of shelters by means of concrete and iron; he places them under cover inaccessible to the feared high-angle fire, or raises the earth above the bombproofs to a greater height. Above all things, he will have recourse to armoured constructions—forts or batteries built of concrete and steel. He places the guns of large calibre in revolving sheathed mountings, in numbers corresponding to the effect desired, the lighter ones being on disappearing mountings, which are only elevated in actual use.*

The regular process of assault labours, moreover, under the advantage of requiring much time. The defence may be successful by the fact alone that it survives the end of the war, or at least the time when the fall of the place would have been of direct benefit to the enemy.

The investment of a place is frequently followed by a pause before the first regular attack, owing to the absence of the requisite *matériel*, whereby the garrison gains time to complete the preparations which had been deferred to the moment of the appearance of the investing force. The route by which the siege park arrives, and the places where the *matériel* is deposited, will scarcely remain hidden from the defender, and will give him an indication of the probable direction of the attack, and enable him to strengthen his position at the points threatened. If any advanced works still remain uncaptured, time will be afforded to augment their power of resistance. The assailant will thus be compelled to employ a large portion of his siege park against such positions, which will render a change of objective to another front difficult, and the last doubts will be dispelled. What reconnaissances will fail to report will be

* Success in this competition will fluctuate, but it may be taken for granted that the advantage lies on the side of the movable gun fighting against dead resistance.

readily discovered by officers stationed on high steeples, or by observers from captive balloons.

It is rightly demanded that a besieging force should arrive before a fortress fully prepared for a prompt and energetic preliminary attack, and for effective exploitation of any success therein gained. If that is impracticable at the time, the *matériel* being not yet available, or the number of troops being insufficient, it would be much better to observe the place from a distance, than to appear before it with inadequate means, to draw the attention of the garrison to impending danger, and to raise their *moral* by futile action, as happened in the case of Belfort in 1870–71. The assault must not take place at one point alone, but must proceed simultaneously in different directions. No rest or breathing space must be given to the besieged from the first day. Harmonious and energetic co-operation between artillery and infantry may result in the piercing of the line of outer defences, or even in depriving the enemy of the use of his guns over ground intervening outside the radius of his permanent works. The possibility may even be contemplated of rushing one or other of the redoubts of a fortress, and of silencing adjoining ones.*

While the assailant forces his way up to the main works of the fortress, the principal portion of his siege park arrives, and enables him to proceed to the regular attack of the *enceinte*, supported by the mobile field artillery. At least two opposite fronts must be attacked, the point of the decisive assault being hidden from the defender to the last moment.

The ruling principle, accordingly, here also is to give fortress operations a certain degree of mobility, not unlike that of warfare in the open field, in which the use of ground and circumstances, co-operation between the different arms, the art of deception, and surprise, are combined to the end

* Armoured forts and batteries would probably be safe against direct assault, but surprises and attempts at blowing them up might endanger them seriously.

that the attack may be carried out without pause, to the utter discomfiture of the opponent.*

These suggestions may certainly claim the merit of pointing out the road to follow, because they do not rely solely on superiority in artillery *matériel*, but also allow due scope to the genius of the commander, to the exercise of initiative and manœuvring power, and to intelligent action generally.

The guns will, nevertheless, speak the decisive word in fortress warfare, and an attack with weak or inferior *matériel* cannot hope to succeed, save under very exceptional conditions.

This circumstance is of no little influence upon the *rôle* of fortresses in great wars. Important modern fortresses possess 400, 500, perhaps 600, heavy guns, or even more. The attacker need not, it is true, exceed these numbers, for he can mass his batteries at decisive points, whilst the defender must arm every front, some of them more liberally than others. Besides this, the attacker enjoys the advantage of being able to move freely and of selecting the positions of his batteries, which constitutes a material element of strength. He will, nevertheless, have to bring up hundreds of heavy siege-guns, in order to be able to begin with fair prospects of success. We know what incredible difficulties this causes, and that the attacker must be extremely sparing of sieges, and not decide on them without extreme care and serious deliberation.†

As a general rule, in the future only those fortresses will be invested the possession of which is considered absolutely essential for the conclusion of peace, and such as must be taken in order to gain the most necessary space for the forward movement of the armies. Where the enemy's capital is fortified, its capture will form the last act of the drama. Special reasons will seldom be decisive, as was the case with

* This idea was first developed by Sauer in his "Ueber Angriff und Vertheidigung fester Plätze," Berlin, 1885.

† Vide p. 195.

Sebastopol, where England wished to destroy the nursery of Russian naval power in the Black Sea.

Hence it follows, that the most natural objects pursued in the building of fortresses consist in securing the possession of important places, particularly such as have an important bearing on the movements of the field army, the blocking of communications, and the protection of an exposed capital.* River crossings are accordingly protected by fortifications, so as to ensure a safe passage under the shelter of extensive works. Important military and naval arsenals are similarly protected, if their situation exposes them very much to the risk of destruction. Great fortresses are also built in distant provinces, which are much exposed to invasion, and into which, by reason of their situation, no considerable army can be sent. By their aid, even in the absence of a large army, it would then be no easy task to dispossess the owners. East Prussia would never fall into an enemy's hands as long as Königsberg held out; whilst the reconquest of the province would be rendered easy by the possession of that place. Only a very much weakened adversary can be forced to surrender such bulwarks by pressure in another locality; thus, for instance, the Russians before Constantinople succeeded in compelling the surrender of the Bulgarian quadrilateral.

Theoretically an even greater influence is accorded to fortresses in relation to all major operations of war. They are made silent partners in all the evolutions of armies, being considered as pivots of concentration, as a basis for the movement in advance, and as gates for sorties; their influence in regard to flanking operations is also spoken of.

Such views, however, are apt to conceal confused ideas, and require a simple course of explanation.

That the strategical concentration is facilitated by frontier fortresses is correct in so far as otherwise it would be easier

* Vide p. 194. From what is said there the extreme importance to the preservation of the Turkish Empire of the effective fortification of Constantinople, both land and seawards, becomes apparent.

for the enemy to disturb it, if he could put himself promptly in possession of the points thus closed to him. Strong garrisons, immediately on the outbreak of hostilities, can send out detachments to occupy important railway bridges, &c. The observation of the frontier is facilitated, the soldiers in the frontier districts have a safe place to assemble in, and to be clothed and equipped. The fortresses, too, afford accommodation to magazines, which, if not already existing in time of peace, must be rapidly established whilst the troops are assembling. In short, fortresses afford no end of accessory advantages. But their protection to troops in the course of detrainment and deployment is limited. The enemy cannot, it is true, proceed in the immediate vicinity of the fortress to interrupt these operations, and, moreover, the troops of the arriving army which detrain within fortresses are absolutely safe. This advantage, however, can only be enjoyed by a comparatively small part of the whole army. At no great distance from the fortress interruptions of traffic on the railway are already possible.

Only in cases where the independent secondary works of a fortress extend the protected area in different directions, so as to embrace an entire section of country, the place will be of benefit to a whole army, by guarding it against the unpleasant prospect of being attacked while still engaged in the process of concentration. In this connection we may refer back to the beginning of this volume,* where the idea is expressed of connecting adjacent fortresses by smaller independent works, designed to restrict the enemy's freedom of movement, and to deprive him of the use of roads and railways.

The fortresses of former times were of great value as *bases*, where the armies were dependent upon one, or at most only a few, magazines. Had Naumburg been a fortress in 1806, Napoleon's enveloping manœuvre could not have made the same crushing impression on the Prussian army upon the Saale which it actually did. Its one chief magazine was

* Vide p. 3.

situated there and was lost at a stroke. In these days, when the whole country in rear of the armies is full of supplies of all kinds, the loss, and, consequently, the protection also, of such an emporium can be of little moment. The *rôle* of a fortress, as a basis, is thus limited; it will only be of importance where concentration has to take place within a very narrow space: for example, where a naval Power possesses fortified harbours on a foreign coast, which form the natural and sole basis for its operations by land.

That fortresses are especially favourable *gates for sorties*, is also difficult to prove. The works do not facilitate movement. An army will attack much better over open country. If the army is confined to a narrow strip of land, a depression between mountains, for example, which the enemy could close against it with few troops, it will, of course, be well to secure possession of the pass. The French thus secured their hold on the famous "*trouée de Belfort*" by the erection of a first-class fortress. But it is difficult to block a passage in a civilised country well provided with roads. A few good forts would probably have sufficed for the safety of Belfort, and a great fortified camp might have been dispensed with. Belfort in its present form serves more the purpose of securing the permanent possession of a point, the cession or retention of which was the subject of discussion in 1871.

As to the *flanking effect of fortresses*, this is still more open to question. The underlying idea is that the commandant of a fortress which is not being invested can employ his garrison in outside operations. In conformity with this idea it would be impossible for the adversary to allow his lines of communication to pass close in the vicinity of a fortress, unless he was prepared to leave considerable forces on the spot to protect them.

The correctness of this view will be recognised by every commandant, and every one of them would agree that that would be the only way to turn the stronghold, built with so much expense, and its numerous garrison, to account, in case the enemy attempted to pass by disregarding it. He may

even think it possible to compel a siege by constant and energetic activity within a wide radius, in order that the fortress may thus be made to serve its proper ends. But there are plausible and weighty reasons against the realisation of this plan.

In a great fortress there is such an extraordinary amount of work to do on the breaking out of hostilities that all energies must first of all be devoted to the works. The best of fortresses, moreover, are not, in times of peace, in a perfect state of defence. The ground must be cleared all round, the ramparts must be prepared for the mounting of guns, the ditches cleared out, obstacles constructed, gates and bridges strengthened, crossings, ways, and lines of metals laid, outlying villages fortified, advanced positions built, ammunition prepared, *matériel* placed in readiness, and bomb-proof chambers built, which, in extent, often are many hectares square. Besides this, magazines, depôts, and hospitals must be organised, and measures taken for protection against fire. Every fortress will show deficiencies, which could not be made good in time of peace, but which remain to be dealt with in anticipation of war. In short, there is sufficient work to last throughout an entire campaign. There always remains still much to do and much to be desired. The completion of provisional works, if they are to possess any degree of defensibility, requires months. The French, at Metz and Paris, surrendered to us fortifications at which they had been engaged during the whole investment, and which in the end were still in a partially incomplete state.

In comparison with the extent of modern fortresses, the garrisons of the various sections appear quite insignificant. They are so scattered over an enormous space as to leave the defences weak at any point considered by itself. The call for reinforcements will be heard on all sides. The guard and outpost duties upon the extensive lines make immoderate demands upon the forces.

The commandant must do his utmost to be well prepared at the commencement of a siege. Under these circumstances

he will always imagine the moment for outside operations not yet to have come, and then, when finally it does arrive, he will discover that he has really no forces available for such enterprises.

The fear lest the enemy should begin an investment before the flying columns have returned, and that thus their return will be impossible, prevents distant raids being made, and in the immediate vicinity there is frequently no adequate object.

In any case such operations have to contend with great difficulties. If they have no definite object, as, for instance, a magazine, vulnerable places in the enemy's lines of communication, &c., they will frequently be mere expeditions *en l'air*. To sally forth merely in search of booty worth the taking is, generally speaking, impossible, because the troops sent out will be weak in cavalry, the service of intelligence will, consequently, be greatly impeded, and the commander will have to grope about in darkness. It is also very rarely possible in a fortress to be sufficiently informed as to what is going on outside, so as to know definitely that the enemy is not in a position to rapidly collect superior forces, and crush the detachments of the garrison that have ventured into the open. Their situation will, moreover, be more critical owing to the fact that they can only beat a retreat upon one single point. But the annihilation of one of the columns may, when its strength is a considerable one, jeopardise the defence of the fortress against a serious attack, and the moral effect of such a loss upon the garrison is, beyond doubt, serious. If detachments of the garrison sent out meet with some of their own troops in the field, and become involved in fighting in combination with them, they are apt to find another mission, *and they will generally be very glad of the occasion*, being thus lost to the fortress commandant. This experience was made, in January 1871, by General Rolland, when he despatched the battalions of his Garde Mobile from Besançon to support the Army of the East operating in the relief of Belfort. They never returned. The eagerness of

troops to free themselves from the ban of a fortress, which is always regarded somewhat in the light of a prison, is too natural not to be reckoned with.

The Damocles sword of a regular attack is always hanging over the head of the commandant, and this will make him chary as to outside operations. If he is quite certain that such attack does not threaten him, that the enemy has disposed of his siege-train and cannot bring up fresh *matériel*, that would be the propitious moment; but the certainty of it will only be attained in the rarest cases. *Fortresses protect the troops they contain, but, at the same time, anchor them to the spot.* A bold attacker will pass close by with impunity, and will not hesitate to open his lines of communication at a moderate distance. The flanking effect of a fortress is, ordinarily speaking, not great.* Exceptions may occur, when the garrison is exceptionally strong, or when a part of the active army has been temporarily driven into the fortress, in which case these forces, upon which the commandant had not reckoned, and which do not belong to him, must be turned to account in some way or other.†

During the war of 1870–71, the fortress of Langres lay in the rear of the German army. With a garrison of 17,000 men, and at no time threatened or even invested by half this number of troops, this fortress never really endangered the lines of communication of two armies which passed but a few miles away. Much was, it is true, written and talked about

* General Brialmont replies that the two reasons here advanced against the flanking effects of fortresses, viz.: the large amount of labour required in and round the place, and the difficulties of the retreat of expeditionary detachments, are not valid. The former, he says, would disappear immediately if fortresses were provided with sufficient armoured equipment (*armement cuirassé*), and the ramparts were always kept in such a condition that not much remained to be done at the outbreak of war. The second objection would fall to the ground from the moment that isolated fortresses gave way to fortified sections of country (*régions fortifiées*). See Brialmont, "Les Régions Fortifiées," pp. 66, 67, Bruxelles, 1890. That is quite true, but financial considerations will prevent the realisation of such desirable objects for yet a long time to come.

† Such bodies of troops will, of course, feel little inclination to allow themselves to be confined permanently to a fortress.

its being the seat of all annoyances, but these consisted far more in what was feared than in what actually took place.

The two interruptions of any importance which took place in the country about Langres, the surprise of Châtillon-sur-Seine, on November 19, 1870, and the blowing up of the bridge of Fontenoy on January 22, 1871, were the work of French raiding parties, acting independently. Yet neither the commandant nor the garrison can be reproached with inaction. They, too, laboured under the restriction of natural forces. The only expedition made with a considerable force of all three arms to any great distance ended at Longeau, on December 16, 1870, with the defeat and death of the commander.

Every fortress commandant, who is not besieged, should certainly endeavour to profit by his combatant forces in offensive action. But only few possess the opportunity, still fewer the necessary daring. The task is not a light one.

We shall thus see in every war a great number of fortresses fully armed and prepared, whilst only a few of them will play any part.

A modern fortress of only moderate importance has a garrison of 25,000 to 30,000 men. Five such fortresses thus absorb a whole army, and too great a number of fortresses may accordingly be regarded as only a source of weakness. Some field troops will usually be mixed with the garrisons.*

Fortresses within the radius of actual operations may be of great advantage to the army in the field. Most dubious, however, is that advantage, which is made so much of, namely, that a defeated army finds protection behind the forts of the place, can re-form and rest there, and then resume the

* However, great existing fortresses cannot simply be abandoned, in order to spare troops ; at all events, such a resolve is hard to make. Changes in the political situation may unexpectedly make a dismantled fortress a place of importance. The unexpected course of a war may give it an importance not previously foreseen. In the case of a few important fortresses it is essentially necessary to keep them from being taken by the enemy, who would seize them, if it were made easy for him. Here the works must remain, even when a siege is not expected.

offensive. The last part of the programme will, as a rule, remain a good intention. *Great armies, which are shut up in a fortress after lost battles, are, as the history of investments from Alesia down to Metz proves, almost always lost.* This is primarily due to the bad moral effect, which the consciousness of having a secure refuge behind the guns of the fortress must exercise upon every army which has learnt to know and to feel the superiority of the enemy. Next, it must be considered that the freedom of movement of a large army encamped under the guns of a fortress is very small. Masses of houses, gardens, walls, hedges, plantations of all kinds fill up the intervals between the works. The troops are more or less confined to narrow streets, and their deployment for battle is a slow process. Providing the investing army finds well-situated observing stations, its concentration at the point of sortie will be completed before that of the besieged.* The investing army has to cover greater distances round the fortress, but enjoys the advantage of being able to utilise more roads and to march without opposition. At the spot itself it needs only to make a passive resistance. The reinforcements, which are being brought up on the line of investment from both sides, come in a direction unfavourable for the enemy attempting to break out, *i.e.*, upon his flanks. The disadvantage, that every army of investment only opposes a thin line to the enemy's concentrated masses, is only apparent. The neighbouring corps of the part attacked form natural reserves, and they are in a better situation at the sides than in rear. When the investing army has concentrated upon the threatened point, the greater part of their positions round the fortress will certainly be but weakly occupied for the moment. It would seem possible then to break through somewhere; but the invested army, too, is concentrated at a point other than where the roads lie open. Before it can face round, the observant besieger would most

* The captive balloon, too, will naturally be brought into requisition, and in clear weather will give timely notice of preparations for a sortie on a large scale.

likely be ready to confront it again. The present effect of fire renders it impossible to rush even a thin line with precipitation, and whilst it is resisting, supports have time to arrive.*

The invested will rarely be able to judge when and where the circumstances are favourable for his bid for freedom. Errors and mistakes are very easily possible. But even if the first attempt succeeds, the liberated army will have the enemy upon both its flanks. Its baggage and commissariat cannot possibly be brought out as well, and without these it is not capable of keeping the field for long. Débris and parts may escape, but never a whole army in a state in which it could play an effective *rôle* in the open field.

An army can easily be got behind fortifications, but only with difficulty back again into the open field, except it be that strong help from without lends it a hand.

Weaker garrisons find much more readily the way to liberty, even when surrounded by comparatively greatly superior forces. The best instance of this is furnished by the successful sortie of the garrison of Menin under General von Hammerstein, so clearly described by Scharnhorst: 1800 men here cut their way through 20,000.†

Whatever the relations between fortress and field army, the latter must make it a supreme rule *never to allow itself to be thrown into a fortress.* Even to pass through it is dangerous, because the army may easily be retained against its will. But under certain conditions it cannot be avoided, as in the case of changing from one river-bank to the other, though here the danger is naturally less.

* The invested army may, it is true, attack with a few corps at a place other than that at which it is intended to break through, in order to decoy the invester there, and then attempt a passage elsewhere. But the enemy, as a rule, will quickly see through and checkmate this manœuvre. The chances of success are better if an attack be made with the bulk of the forces, so as to compel the enemy to collect his troops on one point of the investing line, and then to break through on the other with a corps that has been kept concealed. But in that case only a fraction of the invested army is saved.

† As to the influence of the strength of an invested army upon the possibility of its cutting its way through, *cf.* Blume, "Strategie," p. 249.

It is always better *to use a fortress as a point d'appui*, which enables the field army to keep its full freedom of action. But in such a case the touch must not be an immediate one. The enemy will, generally, take good care not to pass between an army and a stronghold in its immediate vicinity, even when the road is open to him. In this manner, fronts of considerable length can be covered, which it were otherwise impossible to hold with the number of troops available in the field. A fortress of the first rank, with a circle of forts, having a diameter of eight to twelve miles, already covers a line of front of from sixteen to twenty miles. A field army resting upon a fortress is, moreover, in the favourable position of only one of its wings being liable to be turned, where it may keep its reserves in readiness from the beginning.

The presence of fortifications on the lines of rivers confers inestimable advantages. Field-Marshal Moltke, in his memoir of 1868,* describes the Rhine with its fortifications as "a defensive line which could be held with 100,000 men against all comers for from four to six weeks." Whoever holds the fortifications on the banks of a river commands both sides, and can act on either with combined forces against the divided forces of an enemy. This consideration will cause the leader of an intended crossing to hesitate, as he must always fear an attack on either bank. Napoleon censured the Viceroy Eugene very strongly for failing to utilise in this manner the small fortress of Custrin during the retreat of 1813 for the defence of the Oder. "If, instead of retiring to Frankfort," he writes, "you had taken up a position in front of Custrin, the enemy would have thought twice before venturing to send a particle of his forces to the left bank. You would have gained twenty days at least."†

The situation becomes even more favourable when rivers and valleys tend in the direction of the fortress, so that the army can occupy several positions in succession, using the

* Vide p. 178.

† "L'ennemi aurait regardé à deux fois, avant de rien jeter sur la rive-gauche."

fortress, so to say, as a pivot, one wing always leaning upon it for protection.

The army which knows a great stronghold only a short distance behind it, ventures a battle against superior numbers with a lighter heart. Its retreat is, at worst, short, and the destruction can never be very great. And if it passes through the fortress, and has it afterwards in its front, the enemy will rarely be able to judge what number of troops, if any, it has left there. This compels the enemy to closely watch the place with strong forces, that is, to weaken himself.

In this way a fortress situated within the theatre of war will be of much service to an army. The proximity of Metz rendered it possible for the army of the Rhine, on its retreat to the Moselle after the battle of Spicheren, to halt without great danger on arriving behind the French Nied; and, with greater patience, still greater advantages might have been reaped. Metz allowed Marshal Bazaine to accept the battle of August 14 without fear; it allowed him to lead back his army across the Moselle, although the Germans reached that river before him; on August 16 and 18, it gave him a support for his left wing, and saved his defeated right from being pursued after the battle of St. Privat. It is evident that Osman Pasha's numerically weak army would not have been able to play the *rôle* it actually did but for the skilfully and rapidly improvised fortifications of Plevna. However, in the cases of both Metz and Plevna we also see that the proper moment for parting from the fortress, which is so difficult to seize, was finally neglected by the leaders of the respective field armies,* and that the means of safety thus turned to means of destruction.

The way in which Ahmed Moukhtar Pasha made use of Kars in the first stage of his campaign against the Russians in the spring of 1877 was a very clever performance. He

* It should, however, be mentioned in favour of Osman Pasha that he himself wished to quit Plevna in time, and to take up a fresh position closer to the Balkans, where he would be in closer touch with his resources, and was less liable to be surrounded in the mountain region. He remained at Plevna in pursuance of definite orders from the Sultan.

retired behind the fortress, thus compelling the enemy to invest it at the loss of time and forces. This at the same time gave himself the time required for the concentration of his still scattered forces in a strong position against the Russian lines of advance. He next drove back the column sent against his right flank, causing the weakened Russian centre to come to its aid from Kars, and driving it back in turn with losses resembling a rout. He thereupon pressed forward victoriously and relieved the fortress, which he subsequently used as a *point d'appui*. Kars at that time was in no way prepared for a vigorous defence against a regular siege, possessing barely sufficient power of resistance to be left to its own resources for even a brief space. However, none but a skilful and active commander would know how to derive due profit from the proximity of a fortress, as happened in this case.

The extension of fortresses by girdles of forts, which are in these days considered to be indispensable adjuncts, has really introduced no new element into the mode of waging warfare. The idea of fortified camps is an old one, and Babylonians, Carthaginians, and Byzantians have led armies behind the walls of great and populous towns, in order there to continue the resistance which was impossible in the open. Only the dimensions have been altered, with the ranges of the propelling engines employed by the attackers. A more modern idea is the construction of chains and groups of forts. By this means an attacking army can be brought to a standstill, and garrisons counting tens of thousands are not needed. The observation and defence of the battleground between the forts is thus dispensed with; no town circumvallation behind them need be kept, and yet the enemy's passage will be as effectually prevented as by a great fortress. Such works have always, it is true, a certain element of considerable weakness. Many single commandants, many small garrisons, work side by side, and, if not the fate, yet the utility of the whole depends upon the uniform efficiency of all. The possibility of a mistake or a disaster occurring in one place is

increased. If, owing to such, a fort should fall early into the enemy's hand, the value of the whole group or line is not, perhaps, entirely lost, but will be very considerably diminished. What we have said about defence on an extended front finds its application here also. The danger can be diminished by the field army placing itself in close communication with the works, and thus prevent their isolation, whereby the line of forts, with interspersed field entrenchments, gains the character of a front of a very great fortress attacked by an enemy. The troops employed to fight between the forts are not lost to the field army, and the danger of investment vanishes. There remains only the danger that the army, owing to the advantages which such support affords, may allow itself to be drawn too much into a *purely passive* defence.

We have already said that the manner of attack upon such groups or lines will be different according to the disposition and character of various armies and generals.* For their capture by force the destroying power of artillery is the sole safe means, so long as a special method of blowing up such works from a great distance has not been discovered. A bombardment of forts, which are at all formidable, with ordinary field-guns does not hold out any prospects of success. High-angle guns will certainly give better results, but, in order to ensure success, the services of the heavy artillery of the field army, or even of siege guns, cannot be entirely dispensed with. It is true, such masses of heavy ordnance as must be brought up against a great fortress will not be required. But if we reflect that the transport of one single piece of heavy ordnance with the smallest admissible supply of ammunition requires up to forty horses, the difficulties to be contended with here are not small. In order to get fifty guns to bear upon a fort, more than 2000 horses are needed, including those of the mounted escort. This constitutes a heavy burthen upon the army, and creates additional difficulties for the offensive.

* Vide p. 153.

Bold men in similar cases have dispensed with the aid of artillery, and have proceeded to the assault with the means available at the moment. Although both engineers and infantry have recently made great progress in dealing with obstructions such as walls and water-filled ditches of fortifications, still, such an assault demands of the troops extreme heroic courage. Under exceptional circumstances, such a demand may be made with full confidence, but it must not become the rule. Besides, the peculiar "family life" of our national armies militates against the execution of such daring strokes. The person who orders the storm and the person who carries out the orders are, as a rule, personages in spheres widely apart. Before a fort, only small forces can be employed on account of the confined space. The written order is issued from army headquarters and passes successively through the hands of army corps, division and brigade staffs, finally remaining with the infantry regiment of the advanced-guard, which is deputed to carry out the order. If a stubborn assault does not succeed, it entails great sacrifice of life. But with a loss of 1200 or 1500 men a regiment ceases to count for the rest of the campaign, since it will afterwards consist mainly of recruits. Moreover, the confidence of the men will generally be shaken in the leader whom they saw making the dispositions for the assault, namely, their own commander, who may nevertheless be quite blameless.

To fall in a vain assault on fortifications is, according to our present accepted views, somewhat less glorious than to meet death in battle in the open field. There is, accordingly, the danger that the whole affair, if it does not easily succeed, will be prematurely abandoned while honour is still safe. Who, then, would wish to attempt an undertaking the issue of which is so much dependent upon chance, and in which, if he fails, he may be certain to be stamped a butcher by those around him, and by the world generally an idiot? Storms upon forts, before the work of destruction has been thoroughly accomplished by artillery, can only be executed by Albanian

chiefs, or by leaders who, by virtue of the character of the army in which they serve, may ruin a regiment to-day, and to-morrow may hope, surrounded, so to say, by a nimbus of reckless daring, to be at the head of another. Under other conditions it will, perhaps, be well to depart for once from all distinction of regiments, and to form the storming columns from miscellaneous bodies of troops, placed under the command of a particularly daring officer who thirsts for distinction. The personal leadership of officers of high rank may also perhaps tend to ensure the success of such exceptional ventures.

Where the gaps are filled by field entrenchments, the attacker will, in the course of the battle, see the defender bring guns of heavy calibre into action, not only in, but also between, the forts. He must carefully entrench himself, gain ground at night, and hold it by day. A protracted struggle will result partly like that before a fortress, and partly like a battle in the open field, and in which the well-directed fire of artillery and infantry, and above all the greater tenacity of the troops and their leaders, will decide the day.

As such an uncomfortable struggle will naturally be evaded by every one who can possibly do so, groups and chains of barrier forts will only be of use where, from the formation of the country and the position of the communications, they cannot be disregarded by armies in the field.

This greatly limits their employment. They are unsuited for sustaining secondary theatres of hostilities; for the course of the campaign being otherwise favourable, the surrender of a few hill forts, with a garrison of a few hundred men, can be easily effected subsequently through diplomatic channels.

For the purposes of secondary fields of operation, particularly when the forces available for their defence are limited in numbers, the fortified areas advocated by Brialmont appear to be most appropriate. In his work on the subject* this world-famed engineer unfolds ingenious theories as to the

* Brialmont, "Les Régions fortifiées," Brussels, 1890.

construction and employment of "régions fortifiées." They are to consist of a great fortified camp with a certain number of adjoining *points d'appui*, the whole forming triangular or square areas at points of strategical importance, generally with sides of from 25 to 30 kilomètres in length. Within this area an army in need of shelter will find a safe retreat, like a spider in its web, where it can lie in wait for an eventual victim. The example of the Venetian and Bulgarian quadrilaterals is adduced, though neither of these exactly corresponds to the master's requirements. In the case of the former he suggests the provision of an additional fortified support in the interior; in that of the latter, the formation of a fortified camp as a central point, the four existing fortresses being used as *points d'appui*.

The investment of fortified areas is rendered impossible by reason of their extent. The field army within enjoys greater freedom of movement than in a single place of arms. Retreat after a sortie cannot be cut off. The assailant himself may force his way in, but being weakened by the necessity of having to keep the various works under observation, he may be defeated by the defender leaning on one of his strongholds, in the same way that Archduke Albrecht defeated the Italians. If the assailant advances with divided forces, opportunities of profitable action against one of his columns are more apt to occur than in the open field, of which we have the example of Custozza. Fortified areas thus considered compare favourably with isolated fortresses and chains of barrier forts. When, however, General Brialmont proposes to secure entire districts in this systematic manner, and to either block every possible line of advance, or to threaten them from a flank, thus constellating the map of Central Europe with a network of fortifications, he seems to us to go too far.* As all his works are, moreover, to consist of armoured structures, with all the best modern equipment, the

* In his proposals as affecting Germany the fortified area of East Prussia, with Königsberg in the centre, and Pillau, Tapiau, and Preussisch Eylau as *points d'appui*, appears the most practicable.

cost would be prohibitive. The troops for a part at least of these areas would also have to be detached at the very beginning of war, whereby the field army, upon which the safety of a country depends, would be greatly weakened.

Undue reliance on fortifications arises from a consciousness of weakness, and nations animated with the spirit of the offensive will observe proper moderation in that regard. Whatever nation seeks safety behind ramparts and ditches is lacking in a sense of vigour; it will surely confine itself in an increasing degree to a passive resistance, the end of which is bound to be defeat, however long it may be deferred.

The idea of movable armaments has become most fascinating of late. It originated in the proposals of the German engineer Schumann (died in 1889), who aimed at replacing the monumental works of stone, concrete, and iron by structures of a lighter type. He proposed to provide protection against the destructive effects of artillery, not by strengthening the breastworks, but rather by reducing the size of the target and by concealment, so as to reduce the chances of its being hit to a minimum. There thus originated the shielded mountings known by his name, at first for heavy, subsequently for guns of lighter calibre, developing finally into movable shielded mountings for quick-firing guns.* These latter, while too small to be hit by heavy siege guns otherwise than by chance, are perfectly safe against field artillery projectiles and rifle fire. Combined in batteries and stiffened by a single heavy piece, they form such a solid front that any attempt at rushing them would rarely succeed, and then only with very heavy loss indeed. A regular attack, similar to that on the works of a fortress, though perhaps less protracted, would thus become necessary, whereby their object is fully attained. With a view to greater security it is advisable to arrange these batteries in several lines, placed in accordance with the formation of the ground. Although visible to greater distances than generally believed, still they can be masked by simple means. If the guns with their steel mountings are

* Vide pp. 3 and 305.

already on the spot, a few weeks will suffice for the completion of a fairly strong place, able to withstand with a small garrison a numerically superior opponent.* There remains, finally, the possibility of transferring the whole equipment to another locality if circumstances demand it.

It will thus come to pass that fortresses will be relieved of their greatest element of weakness, which is, that though constructed at an enormous cost, and garrisoned by a small army, they may not in the end be situated in conformity with the course of events. It is rightly maintained that points of strategical importance can always be identified, but their number is so great that due provision cannot be made for all separately. Moreover, the fortune of war occasionally plays astonishing pranks, and attaches unexpected importance to places not ordinarily entitled to particular consideration. What would not the French have given in 1870 if Orleans had been, or could have been, rapidly converted into a stronghold invulnerable to direct assault? Still, no one would have ventured to propose the fortification of the town before the events of that year. Who, in 1877, had any thought of Plevna?

The means of creating fortifications almost at will is of great value alike to the attack and the defence. How pleased would not Napoleon have been if he had been able in 1812 to convert Smolensk into a great fortified camp. Movable armament is particularly adapted for ensuring the safety of the large magazines in the rear of the army within the enemy's country, nothing more being required than the storage of lightly shielded movable or portable quick-firing guns on the lines of communication. Extensive positions, such as the Danneworks of old, could be rapidly converted into fortified lines. The first example of the employment of this system on a large scale is given by the part of Roumania between the Danube and the Carpathians, on the line Galatz-

* A battery of one 4·7 inch quick-firing howitzer and four 2·09 inch quick-firing guns requires the services of one non-commissioned officer and fifty-five men.

Fokshani. Shielded mountings have their further uses in closing the intervals between the advanced works of fortresses, in barring the gates for sorties, and in blocking defiles of all kinds. They will also prove valuable in counter approaches carried by the besieged forward of the fortress to disturb the work of the engineer of the attack. Experiments have been made at manœuvres in the use of mobile guns on shielded mountings for the creation of strong *points d'appui* during the progress of an engagement. It is thought that there will be many opportunities of using this type of armament in field operations; but its low degree of mobility prohibits its being regularly taken out, and its practical application can therefore be merely the result of chance or specially favourable circumstances.

The science of war cannot afford to disregard these new means of combat, however much they may still be in need and capable of improvement.* By their medium field army and fortress can work hand in hand, without the latter becoming fatal to the former.†

They will often fulfil their purpose by merely compelling the opponent to bring up siege *matériel*, which alone, if he is unprepared for it, creates great difficulties for him.

16. *Military Operations beyond the Seas.*

When in the Crimea the armies landed on a foreign coast prevailed over the forces opposed to them, this was attributable to the fact that the communications of the attacker by sea were, in spite of all difficulties, superior to those of the defender in his own country. Let us imagine, for a moment, a network of Russian railways in 1854 as advanced as at the present day, and 120,000 French, English, Turks, and Sar-

* For details see Julius von Schütz, "Die Panzerlaffetten," second edition, Madgeburg, 1889.

† The fact that an improvised place of arms cannot replace one constructed in time of peace with all the resources of military art, does not alter the case, that not being the point. The object of fortifications is less to hold out against a protracted siege, than to withstand open assault.

dinians would not have been able to hold their own there for long.

The superiority of the Japanese on Chinese soil is explained by similar reasons, irrespective of their greater military efficiency. Their attack on the Celestial Empire is the greatest modern example of operations across the sea, since within a period of six months they landed 120,000 men, with numbers of field, mountain, and siege guns, on the coasts of Korea and China.

The successes of the Federal armies by descents upon the coasts of the Southern States during the War of Secession are explained by the fact that by a seizure of the harbours the rebellion was at the same time deprived of its main sources of strength, and that in a thinly-populated country the rapid collection of fresh armies for the reconquest of lost ground was impossible.

In a mid-European war conditions would be quite different. In the first place, in a struggle between great Powers here in Europe the forces are so evenly balanced that no State would care to dispense with a single corps of its field-army in order to employ it in uncertain undertakings upon distant coasts. This was speedily felt by the French in 1870; their landing projects soon fell to the ground owing to the force of circumstances.

"It is obviously important," says the German project of operation for that war, "to make full use at once of the superiority which the North German forces alone confer upon us."

"This advantage will be still more increased at the decisive point if the French should commit themselves to expeditions against the coast of the North Sea, or against South Germany. Sufficient men are left in the country to protect us against the first-named enterprise."

This conception will be true, more or less, of every mid-European war.

The fruits of over-sea expeditions will but rarely counterbalance the disadvantage accruing to the field army from the

weakness caused in its ranks by the despatch of expeditions. Before a corps, landed on the enemy's coast, has scored any material success, and can spread itself freely, and before the fleet has taken a number of places on the coast, the freedom of movement of the landing corps will be very limited. Such disabilities can only be compensated by daring enterprise and a surprisingly rapid advance, for which, however, cavalry is lacking. Of this arm an army landing on a foreign coast requires a strong force, so as to be able to reconnoitre rapidly in all directions, to destroy railways at a distance, and to check the approach of the defenders, who are collecting on every side. But horses are, of course, more difficult to convey by sea and to disembark than men and *matériel*, and there will therefore always be a shortness of cavalry.

The present military systems of the great European nations are so far prepared for every contingency that even when all field and reserve troops are already engaged in battle on the frontier or in the enemy's country, a considerably superior force can still be quickly assembled to resist descents upon the coast. Landwehr and depôt troops in great numbers have not yet taken the field, and are available in garrisons. Great inland fortresses, which are not threatened by the enemy's field army, can furnish strong compact bodies of troops. New formations and the Landsturm levies are now called, and will not fail when the native soil is in evident danger. The telegraph and the railways, with undiminished working capacity, bring up forces from the most distant provinces. True, the attacker can also reinforce himself by despatching a second army corps; but before its arrival a considerable time must elapse, and the fate of the first will meanwhile have been decided. Landings and operations on coasts have accordingly not only to contend with great difficulties, but have generally but little prospect of appreciable success. They can, therefore, only be undertaken under especially favourable conditions, the first of those being a superabundance of forces. If Germany were attacked simultaneously by two great Powers on the East and on the West,

their combined fleets and armies could certainly muster sufficient means for a descent upon our coasts in respectable strength. It would also be possible to bring the movements of the landing army in accord with those of the field army of one of the two allies, whereby prospects would be considerably brightened. If Denmark, in 1870, had been arrayed on the side of France, France would have been able to land troops upon the easily accessible east coast of Denmark, and, in combination with the Danish forces, could have undertaken an expedition against the Lower Elbe. The lack of cavalry, which makes itself so sensibly felt, would have been made good by the Danish army; the allied army would have mounted up to considerable numbers; and the whole of Denmark would have served for a base of operations. But, under such circumstances, the character of an over-sea expedition is lost, since it would merely have been a question of conveying a part of the allied forces to the point of concentration by sea.

It will always be prudent, in order to gain some freedom of movement upon the enemy's soil, first of all to seize a considerable stretch of coastline. An island close off would facilitate the safe disembarkation and formation of the troops, but then the element of surprise would be lost, as the defender would gain time to make his dispositions. It is clear that landing operations on a large scale, deep into a country and aimed at important objects, perhaps even at the capital, are only possible after a long war has completely exhausted the energies of the State attacked, and when its last resources in men, horses, and weapons, have been spent resisting invasion by hostile armies.

An attempt can certainly be made immediately at the commencement of the war, when the concentration of forces has not yet been completed. "A French descent upon our coasts, if seriously intended, need only be apprehended in the very earliest stage of the war, as such distant operations would of necessity appear impracticable, directly we set foot upon French soil," we are told in the official account, by the

General Staff, of the war of 1870.* Such descents bear rather the character of alarms, intended to derange the mobilisation and to excite the people, than that of a serious attack.

Upon the masses a certain impression will always be made when the enemy, who is supposed far away beyond the frontier, suddenly appears upon the coast. But let us suppose an army of 40,000 to 50,000 men suddenly thrown upon the part of our Baltic coast nearest to Berlin, that is at the mouth of the Oder,† and advancing upon the capital; the five or six days which would be required to reach the city, would suffice for opposing it with superior forces.

Descents on the coast are, accordingly, in the case of a populous State with a good military organisation, bugbears rather than real dangers. They may, however, assume a critical aspect where the landing is followed immediately by the seizure of an important unprotected objective. We have already quoted the example of the situation of Constantinople in relation to the Black Sea and its bearing on the Ottoman Empire.‡ Copenhagen would play the same *rôle* in the case of Denmark, Amsterdam in Holland, Antwerp in Belgium, although these cities are already protected by fortifications, or are about to be so. The protection of London by means of a fortified camp has already been proposed,§ though an attack on that metropolis would be far beyond the scope of a simple landing operation, and would probably be preceded by a tough struggle at sea.

* Vide vol. i. p. 82.

† Not to mention the difficulty of landing at that particular point.

‡ Vide p. 194.

§ *Army and Navy Gazette*, August 31, 1889.

SECTION V

SUBSISTENCE, SUPPLIES, AND REPLACEMENT OF CASUALTIES IN WAR

One who finds it inconvenient to give his attention to questions of commissariat in war may plead Napoleon's indignant exclamation, "Do not talk to me of provisions!" But the matter wears a different complexion when we observe the Emperor's conduct in his various campaigns. He evinced, at all times, extraordinary care in the measures taken to provide for the sustenance of his armies. Certainly, he did not adhere to any rigid system, but took the means of nourishing his hosts wherever he found them. He understood how to extract supplies, even in exhausted and poor districts, by the promise of high payment, by his tactful treatment of authorities and communities, as well as by threats and brute force. When, to use his own words, the occasion arose, he put the country on both sides of the road on which the troops were moving, under blood and fire, in order to squeeze provisions from it. As he understood how to stamp armies out of the ground, so also did corn grow upon his open palm. But he was above all a master in organising his lines of communication, where purchases, convoys, requisitions, magazines, and enforced feeding by the population, all helped to satisfy his soldiers' wants. In Russia he came to grief because circumstances eventually became superior to the man. His saying must not, accordingly, be taken to mean that a commander must not concern himself in matters of commissariat, but only that considerations of nutrition must not control, but be subordinate to,

those of the employment of the troops. The great ends of the war must be prejudiced as little as possible by anxiety for bread, and for this object every available source must be tapped ; that is what is really meant.

The custom of war which allows armies to take from the country all they require for their sustenance is very ancient. Moses, in sending forth spies into the Promised Land, com mended the system of requisitions with the words, "Be comforted and take the fruits of the land." In the Thirty Years' War, this practice was in vogue to an extent disastrous to Germany. In later times, it was suppressed by the peculiar influences of the development of the political and military systems.* The Great French Revolution, with its reversal of views of right and of political ideas, reintroduced it. It placed, for the purposes of war, at the absolute disposal of those in power the entire resources of all countries over which they dominated.

Thus the principle, "of living on the country," became anew a recognised custom of war, and we adhere to it even now to such an extent, as to regard all the supplies brought up from the base of an army merely as reserve stock, for cases of urgent need, when the theatre of war can no longer yield what is requisite. But in this very particular we are just at present witnessing a change, which will be even more marked in future wars than it was in 1870–71.

By the expression "to live on the country," we have naturally an *enemy's country* in view ; applied to our own, the most essential advantages of the system disappear.

In ancient times the advantages accruing from rendering the troops more mobile and independent were not recognised, and armies clung to their magazines, even when the resources of the theatre of war were being utilised. The greatest importance was attached to bleeding the enemy's country, whilst the invader's country enjoyed indirectly a corresponding growth of its resources. Frederick the Great, in 1756 and 1757, took good care to let his armies live on the

* Vide p. 13.

enemy's country, without any idea of gaining freedom of action for distant conquest. He merely intended to provision his troops for a time, without paying so much for it as in his own country. He wished to keep his money in his pocket, to spare his slender exchequer, and thus to be enabled to carry on the war the longer. In reality, the supplies collected by impost * were considerable, considering the smallness of the armies and compared with the trifling sums involved. At times, the army may have lived without expending a *thaler*, or bringing a sack of flour across the frontier. In the seventeenth century, it was the rule in war to subsist free of cost, and neither Thurn, Mansfeld, Christian of Brunswick, or Wallenstein had regular funds at their disposal for the maintenance of their armies. They acted to its fullest extent on the principle that war must support war.

Now, when armies and the daily expenditure of money are reckoned by millions,† all that is changed. The supplies hastily collected on the march, or by enforced contributions, are insignificant, as far as a saving of money is concerned. Though the troops may occasionally eat and drink at a neighbour's expense, the supply department cannot on that account suspend its operations, nor the public coffers be closed. Considering the care which the feeding of such large masses of men demands, it is impossible to wait to see if anything can here or there be found in the country, but the entire supply for the whole army must be assured by the State day by day. Just as a great household is carried on on the same scale, whether or not one or other of the family be invited to dine at another house, so must the supplies flow continuously for the full number of men and animals, without regard as to whether one or other army corps chances to be in need of the fresh supplies or not. The result will generally only be that the troops live better for a time, that is, consume double. A good deal will be spoiled or lost.

Every one knows, too, how difficult it is to procure even

* The modern system of requisitions was not then employed.

† Vide p. 148.

100,000 francs in an enemy's country by levying contributions, and that is not one-hundredth part of the daily cost of a great army. Even forced impositions are no longer of any appreciable account in respect of reducing our own expenditure.

The unrestricted pursuit of the objects of war is, no doubt, enormously facilitated if the army finds in affluent districts of the enemy's country provisions enough to maintain itself temporarily wherever it turns. But it must be doubted whether this fact has any appreciable effect upon the finances of the State.

If we live upon the enemy's country, it means that the enemy is not in our own, and that our country is not suffering from the presence of the contending armies. Its tax-paying capacity and its credit are not nearly so much diminished as would be the case if a part of its territory were overrun by troops. But the idea, which might have been justifiable in the seventeenth and eighteenth centuries, that it were possible to force an enemy to yield by carrying the war into his country, has now a very limited application indeed. As already said,* the possibility of holding out does not depend so much upon whether we are on this side of the frontier or on the other, as upon our international credit.

In another respect, also, the meaning of the standing phrase, "live upon the enemy's country," is changed. Even Napoleon, in 1812, did not lead as many combatants into Russia as we, in 1870, did into France. In the future, the figures of 1870 will be greatly exceeded. Such huge masses of men, passing over a country, consuming everything like swarms of locusts, can only for a very short time be maintained upon scattered household supplies. Let us take the case of a small country town, which is unexpectedly called upon to provide for 4000, 5000, or 6000 men. That may go on for one, two, or three days without difficulty, but not for weeks. The soldier's management in kitchen and cellar of

* Vide p. 148.

his billet is not wont to be very economical. Much is merely "used up" and wasted unprofitably, and under such conditions supplies become exhausted twice as rapidly. We thus, not from pedantry and a desire to obstruct the operations of war unnecessarily, but compelled by the force of circumstances, revert to the use of magazines. It is, however, erroneous nowadays to speak of a system of magazines, for our modern methods of supply are characterised even by *want of system.*

The peculiarity of the old magazine system was that it bound armies to certain points, from which they were loth to separate themselves for more than a few marches. This is, conceivably, no longer the case, and any resemblance to Frederick's times is purely conveyed by the term "magazine." The difference, however, lies less in the new idea than in the modern system of finance. If Frederick the Great had been able to float loans on the Exchange, and if, at the beginning of the Seven Years' War, he had one hundred and eighty million, instead of only eighteen million, thalers at his disposal, with the prospect of being able at any time to effect a new loan, he would probably have acted as we do now, and his method of war would have been of a quite different type. A full exchequer may be worth an army corps, and a clever financier at the side of a commander-in-chief equivalent to a first-rate general; for money is the magic wand in all that applies to the needs of an army. Modern warfare, with its principle of an uninterrupted and regardless employment of all combatant forces, would scarcely be conceivable without subscription loans, by which alone the requisite funds are procured.

The increase in the armies of the present renders all proof as to the vital importance of good commissariat arrangements unnecessary. The increase of population which is caused by the massing of the troops in the frontier provinces defies any parallel drawn from times of peace.* In spite of the liberal disposal of pecuniary resources, the commissariat question is still more vital than idealists, whose fancy indulges

* Vide p. 180.

in schemes of bold marches on paper, would have it, and who, of course, dislike any clog being put on their wheel. Clausewitz teaches: "The provisioning of troops, in whatever way effected, is always of such difficulty that it has a very decisive voice in the choice of tactical measures; it often counteracts the most effective combinations, and compels us to look about for food, when we should prefer to pursue a victory and brilliant successes."

The Franco-German War was waged in a very rich country. The military authorities displayed the greatest activity; they employed all possible men without scruple and pedantry; and yet periods, though certainly only short ones, supervened when the troops were in actual want. In comparison with former wars, we may rightly congratulate ourselves that, in 1870, want never attained to such a height as to impede the military movements in any degree worthy of notice. In this feeling of self-congratulation lies the tacit recognition of the great difficulties with which the commissariat of an army has to contend, even under the most favourable conditions.

When our troops were concentrating in the Palatinate, inconvenience was soon experienced from the fact that only troops and no supply columns were at first despatched to the frontier. This was deemed necessary in view of the sudden action of France and the possibility of a powerful offensive movement being initiated in that quarter. Not only were the columns left behind, but even the approved contractors, to whom the military authorities had entrusted the business of bringing large quantities of supplies into the districts where the troops were collecting, found themselves unable to deliver their stores at the proper places, because the railways were blocked. As they were only paid on actual delivery, it was natural that they should mainly despatch articles on which they earned most; and, in consequence, there was a superabundance of some things, whilst of others there was a deficiency.

In spite of the prosperity of the Palatinate, and the self-sacrifice of the population, it was here seen that "living on

the country," when modern armies concentrate, does not mean plenty. Local supplies were still less adequate than they might have been, owing to the fact that contractors and officials of the military administration were making extensive purchases in the frontier districts at the same time.

The operations in France opened so suddenly and succeeded each other so rapidly that soon it became apparent that the assumption of the supply columns being able to bring up all necessaries direct to the troops was not justified. Mobile and active small trains became a necessity as links between troops and columns. The hopes, too, that the field-bakery columns would be able to attend to the slaughtering of the herds, and supply the troops continually with fresh meat, without trouble to them, were doomed to disappointment. The capabilities of the organisation had been generally overestimated in consequence of obsolete experiences. Sad experiences were made, as we know, in the movement of great herds of cattle, on account of insufficient attention *en route*. The military administration did not lack officials, but working hands. And then the preserved food industry was not sufficiently developed in 1870 to satisfy the demands of modern warfare. The *Erbs-wurst* of historic fame was a very primitive makeshift of the sort. Finally, in the restoration of interrupted communications, particularly on the railways, as well as in temporary construction, not nearly so much was done to give the armies good lines of communication as we expect will be the case in the future.

Meditation on these points will enable us to perceive the direction in which we must move in the future, and on what lines the supply service of armies will eventually be organised.

The provisions which are best and, at the same time, most agreeable to the soldier, are always those that are fresh. He is accustomed to them; they taste best to him; they are also, when served in proper variety, the most health-giving. Fresh beef and mutton, with all sorts of pulse,* rice, potatoes, sauerkraut, rye-bread, and, for a change, bacon, if it can be

* Which should always be given split, so as to be quickly boiled.

served out winter-smoked and in a state of good preservation, deserve preference. Slightly salted* and smoked meat is also useful.

But fresh provisions have this disadvantage, that they take up a comparatively large space, that they easily go bad, and are difficult to keep and to cook. If a soldier was required to carry fresh provisions for three days only they would almost fill his knapsack, even if the bread was replaced by the ordinary army biscuit. How unappetising bacon, meat, &c., would be after a long journey, packed amongst other things, is self-evident. The care which would, at first, be expended in carrying it would naturally disappear more and more in the excitement and hurry of a campaign. If the sun scorches, and dust penetrates to the meat, it becomes spoiled entirely, and in the end very much will be thrown away. Besides, hours are needed to cook it, and frequently the soldier renounces the pleasure of eating, when the meat, which is perhaps too fresh, remains hard and tough in spite of all his exertions, the vegetables prove unpalatable, and wind and rain have spoiled his culinary efforts, or clouds of dust sweep over the camp and kitchens. How often does it not happen in war that, just when the water has begun to boil in the pots, an alarm is raised, and a start must be made. No attempt to cook fresh provisions should be made unless it is certain that the troops will not be disturbed. Artificially-prepared provisions are, accordingly, an excellent substitute. They take up but little room, and are not nearly so heavy as the fresh, so that the soldier can carry a far greater quantity of rations without increase of weight. A handful of compressed coffee squares, or a few bars of compressed soup and vegetables, thrown into the knapsack, cause no inconvenience, and in the hour of need they afford refreshment and nutriment for a considerable time. Nothing is required save boiling water, for all the various condiments

* Of salt meat, which has been in the barrel for several months, the nourishing elements have all been drawn out into the unpalatable pickle, while the meat is left entirely without nutritive value.

have been already added to the small packages. A few minutes are sufficient to prepare them, and their preparation requires no knowledge or special skill. The food remains clean, and does not become bad. Packing is unnecessary, as the preserved provisions are all delivered in tin boxes, and in other safe packing. The tinned meat, the meat biscuit, the compressed vegetable rations, &c., may even far excel the fresh provisions in nutritive value. The extraordinary ease with which they can be carried and used makes all preparations of this kind quite indispensable in future wars. The soldier is enabled to live for a number of days on his knapsack store, in case he does not find sufficient for his wants in the country. This may be of quite vital importance in the future, when great masses are quickly concentrated, or, under specially trying circumstances, where the enemy commands the lines of communication by his forts, as, for instance, where we have, perhaps, broken through a chain of fortifications in order to engage the enemy, but where the trains cannot yet pass with safety. In such times masses of men, such as are now in question, can no longer be provided with fresh bread, biscuit, fresh meat, bacon, and rice, or even with peas and coffee. For the horses, too, artificially prepared food is employed with the best success, and this renders the cavalry capable of undertaking bold and sweeping operations. We must, in the future, avail ourselves as much as possible of the valuable means of becoming independent of commissariat trains for a considerable time, as therein lies a decided element of superiority. What a *rôle*, in spite of their then incomplete form, preserved provisions have played even in 1870 is proved by the fact that forty million rations were served out to the army on its own demand.

Preserved foodstuffs are dear, and, when used for any great length of time, become nauseous.. Besides, they cannot be readily procured everywhere. Private enterprise cannot, of course, keep up in time of peace the plant required to provide at the right time for the enormous requirements of an army in the field. It is a very useful measure of our army

administration to keep a State manufactory, the origin of which was due to the initiative of the superior authorities of the army of occupation in France.* It would, of course, be a mistake to resort entirely to preserved provisions; they can never, not even for a moderate length of time, replace fresh food. They are, however, of inestimable value for the first period of the rapid concentration of the armies on the frontier, and, again, in the course of a campaign, in cases of emergency. Nothing must be left untried that can in any way promote the ends of the war. What would not Napoleon have given to possess such means of provisioning his troops in 1812, or in the critical days of 1814?

The *nature of the provisions* will, of course, differ according to the financial and commercial conditions obtaining in the various countries, as well as to their means of transport. Space is lacking to enter upon particulars affecting given localities, wherefore we shall endeavour to describe the method which appears to be best suited to a great European civilised State.

The army administrative services—the *intendantur*—cannot, in our days, afford to dispense with the help of private persons at the immediate outset of a war. This is due to the simple circumstance that the former, entirely engrossed in time of peace by their duties, which lie in other spheres, are not acquainted with the state of the markets and have no means of controlling them. For that, it would be necessary that every commissariat official should be a wholesale dealer. Only the expert man of commerce knows where to lay his hand at any moment upon the amount of supplies that the army needs. The French army administration in 1870 was in default in that, though possessing a powerful organisation, it was purely dependent upon its own resources, and could not reckon upon the support of the

* These establishments might also be advantageously employed as schools of instruction for administrative officials. In the campaign of 1870 many of them lacked the necessary knowledge of preserving processes, or even of slaughtering animals. Many commissariat officials were certainly compelled to administer field abattoirs who had never seen an ox killed in their lives.

civil authorities. It had become an entire stranger to such an arrangement. A French general in an important command, under pressure of extreme necessity, had resorted to the most natural and sensible measures, and opened markets with the assistance of the civil authorities, a procedure which was loudly denounced in the military press after the war. It was even quoted as an instance of the extent of the existing confusion. In these days people in France have become more clear-sighted, and in their carefully organised commissariat system they rely greatly upon the co-operation of the civil authorities and on purchase by the troops in the open market.

But private assistance must be duly regulated. Hitherto it has, for the most part, been customary on the outbreak of war for the supply services of individual parts of an army * to conclude contracts with purveyors known to them. Only traders were considered who knew the business very exactly from long practice, as novices would soon have come to grief. But these gentry knew full well that they were masters of the market; they understood only too well that their goods were as indispensably required as gunpowder and lead, and, therefore, that they could, as a rule, charge what they liked. Scruples as to expenditure—the main factor in times of piece—vanish in war time. Provisions at once run up to double their normal price. Besides this, the purveyors needed money to an amount not generally at their disposal. They were bound to raise the finances, and, as money in war is the dearest of all commodities, a cautious man would naturally charge an additional 25 per cent. on this account alone. If the other, not inconsiderable, expenses, the chance of losses, and a decent profit be also reckoned, it is easy to understand that the State had to pay 50 per cent. more than the goods, properly speaking, were worth. The purveyors of the several divisions of an army then sent out their agents. Every one believed that he alone knew the best places for buying, or, at all events, was more exactly acquainted with

* Army corps.

them than others. But in the end they flocked together in great numbers at the same place. Competition resulted, as between the travellers of two houses, anxious to oust each other. The State thus created for itself the most dangerous competition. That all the agents and underlings of the contractors would live well personally is pardonable, considering the magnitude of the business. And so the most fashionable hotels in the large towns were filled with persons who would otherwise be unknown there, and the elastic item of personal expenses grows apace. When finally the articles contracted for had been procured for a round sum, the next thing was to convey them to the scene of operations; for the cautious authorities only paid on delivery. Immediately the railways were released from the great pressure of the transport of troops, the race began for the transport of supplies. What impediments stood in the way of making contracts and of controlling their due execution, need not be dwelt upon.

The conditions which existed in 1870, at the outbreak of the Franco-German war, and which made themselves very sensibly felt, must not repeat themselves in the future to the same extent. Above all, steps must be taken to confine the activity of private contractors and surveyors to limits admitting of control. Their doings must be no further cause of trouble, and they must in the future be kept at some distance from the army.

As demands will be much greater in future, the difficulties will also increase in proportion. A remedy might be found in detailing experienced supply officials, already beyond the stress of field service, to make arrangements in time of peace for the purchase of supplies on a large scale in all the more important business centres. Great latitude should be accorded to them, and they should be released from all minor duties, so as to give them both time and opportunity to prepare the ground for their important operations.

If it is impossible to employ such officials, it is still possible to appoint wholesale merchants of repute as commission agents of the State for purchases in bulk. The widespread

belief that this would open the door to peculation is not generally justified. That old-established business houses of standing, to which alone recourse would be had, should charge higher prices than those actually paid, is quite as inconceivable as that their directors were thieves. The malpractices of commission agents are most sternly condemned in the commercial world. It is, of course, not an easy task to control such agents and supervise their commercial transactions, since the higher officials of the supply branch are almost exclusively absorbed in office duties. But for this purpose the military administration could organise a technical board in the form of a commission of merchants, jealous of their reputation, who would bind themselves, in return for adequate compensation, to assist in all commissariat arrangements. Men who disdain to identify themselves with the business of an army-purveyor, always more or less questionable in the eyes of the public, would certainly be able and willing to act as expert advisers, the more so, as on the outbreak of war all pains taken on behalf of the army would be regarded as patriotic actions. These authorities would be best qualified to designate the proper agents for the several towns, and to suggest measures of control and supervision.

Every use made of a foreign market, as a rule, injures the enemy in an indirect way. Could we, by paying for them, have secured the resources of England when France had no longer any communication open with that country through Belgium, Gambetta's resistance in 1870–71 would have been of shorter duration. But such operations, too, must be initiated in time, and placed under a unified direction. In the late war, the agents of our great contractors competed with each other in London, Antwerp, and Rotterdam, as well as in the great industrial centres of Austria and Hungary, to the detriment of the State treasury.

In this respect also a body of commercial advisers would be able to give the military administration most valuable hints; but it must be established and take up its functions in good time, as business relations, not entered into till the

outbreak of hostilities, would only render belated services. It is, at all events, necessary for the wars of the future to elaborate the scheme of a supply system working on a large scale, analogous to the plan of operations, and dealing not only with the purchase, but also with the transport of enormous masses of supplies.

The peace magazines of large garrisons, now common to every part of the army, may be of great service. Assuming that supplies for three, four, five, and six months for the garrison on a peace establishment are kept stored in them, they would suffice for the same garrison at war strength for a considerable time, and might be sufficient even for a whole army corps, for a few days at least. The administration of these magazines * naturally has regular business relations in its district, which enable it to buy up quickly and freely great masses of provisions. Their relations, moreover, will be confined to a certain district or province, and will not clash in the sphere of another administration, whereby the former injurious competition among private purveyors will be avoided. These great peace magazines will serve as reserve depôts providing a continuous stream of supplies for the seat of war.

But their administrations can only be employed with advantage for the delivery of supplies ordinarily handled by them in time of peace, as their business connections only suffice for these purposes. They are not in a position to procure valuable consignments from distant parts or from foreign countries.† For this latter business, agents and commercial syndicates ‡ must be employed. In addition to the purchasing agents, it commends itself, especially for orders from foreign countries, to appoint transport-agencies as well. It may still be found possible, in certain cases, to

* Supply depôts.

† Nor are they in a position to negotiate purchases of live stock, preserved food, &c.

‡ The method of supply by commercial syndicates is known as "Konsortial-Verpflegung."

obtain supplies on the old system through the medium of particularly capable general contractors, which is certainly a great convenience; but still their consignments will not reach the theatre of operations direct, being delivered into depôts or magazines.

The efficient working of the sources whence the army is to draw its supplies having been assured in one way or another, special measures will next have to be taken for the area of operations.

So far as considerations of the rapid concentration of the troops permit, supply trains should be run at once between the trains conveying troops. Again, experience has taught us that trains conveying troops can carry at the same time a not inconsiderable quantity of supplies, without any inconvenience being caused thereby. Hence it is possible to order the troops to be accompanied by supplies for several days, to be taken with them into the area of concentration. Provisions for from three to six days would seem to be a fair amount. Preserved provisions would obviously be best. It is absolutely necessary for the troops always to have these on hand, for in the confusion of mobilisation, especially in small garrisons, it will be impossible to effect purchases with the slender cash resources available. The more the troops are dependent upon their own arrangements for messing, the more likely it will be that they keep a proper stock of preserved provisions.* On leaving the railway, the supplies brought with them will be loaded upon hired wagons or upon carts requisitioned in the country, which follow in rear of the column. Every unit is now provided in addition with good light wagons, well-horsed and specially built for the carriage of provisions and forage, which travel faster and cause less delay in the columns than the sutlers' wagons used in 1870-71.

* Though good brands may keep for years, it is nevertheless advisable to renew them from time to time by consuming and replacing them, if they are to be agreeable to the taste. The fatty substances always suffer to a certain extent by age, and then are apt to become nauseous.

Thus ensured for a time against famine, the troops arrive in the area of concentration. It must be permitted—nay, made a positive duty—to make purchases here in the open market, wherever opportunity offers.* Abundance of local supplies will at once lead to the establishment of a depôt. As the trains and the transport-columns are not yet at hand, carts hired or requisitioned take their place at first to supply a regular service between the troops and the magazines in course of formation. When no longer needed, these vehicles are made over to the transport authorities on the lines of communication. One good quality of such rough and ready wagon columns is their want of a legal status; they are simply used to their utmost capacity, and when no longer required, they are left anywhere. Often another body of troops takes possession of the wreck and makes some use of it. In the absence of regular wagon park columns, the supply department of the Second German Army, in the last war, often availed itself of such improvised trains with considerable success. This department procured at once for each army corps a park of 400 requisitioned wagons and afterwards frequently repeated this measure.

The military administration, moreover, despatches its officials, furnished with considerable sums of money, and accompanied by experienced merchants or agents, to effect purchases in the country round about the district where the troops are concentrating, for the establishment of depôts, wherever the means of communication facilitate such an arrangement. If railways are not available for the purposes, transport by water must be utilised to the fullest extent. A small barge, such as is used on the Spree, can carry 1000 cwt. A great army, of modern dimensions, consisting of 800,000 men and 300,000 horses, requires in three weeks, irrespective of hay and straw, supplies weighing 2,000,000 cwt.; hence, 2,000 such barges would be required for the

* If it even seems possible for a time to arrange for provisioning in billets against cash payment, this plan, will, of course, be adopted forthwith.

purpose. Such a number was in 1870 certainly available for the purpose upon the waterways in connection with the country in which the troops were concentrating, viz. the Rhine, the Main, the Ludwig canal, the Upper Danube, and the Moselle, but they were not utilised to the full extent possible.* Tugs accelerate the transport considerably.

As the resources of field-bakeries are inadequate, private bakehouses of all kinds are set to work on a large scale, and are furnished with an increased number of hands.† Either flour is supplied and payment made for working expenses, or the baking is done independently, by contract with the military administration.

Cattle are bought up on the spot, as they suffer too much in transit. It happened in 1870 that the cattle fell off so much, in consequence of insufficient feeding, that they produced only 41 per cent. of meat, as against 59 per cent. of bone. If they have to be brought up from a distance, special arrangements are required. Stabling will rarely be found where wanted, especially not at the railway stations. Portable shed fittings, which can rapidly be put together, are useful,‡ but the organisation of efficient butchery columns is necessary. Generally speaking, it is not advisable to keep large herds together for any length of time, owing to the danger of an outbreak and the spreading of epidemics. The better plan is to distribute them quickly in small numbers among the troops and columns. Some cattle depôts must be established at convenient centres, from which to furnish to the troops what the theatre of operations may not be able to supply.

The armies and army corps make similar arrangements for their particular areas to those made by the administration of the army for the whole. The officers of the General Staff

* Vide p. 247.

† For this purpose the administration of the Second German Army frequently employed women with great success, female hands being easier to procure in time of war.

‡ Vide p. 398.

who proceed by the first troop trains in order to supervise the detrainment of the troops, are accompanied by officials from the *intendantur*.

In the measure that the troops advance, fresh magazines must also be established. All available means must be employed simultaneously for a common object. All depends upon the efficient working of means of transport. The most important are the railroads within the theatre of operations which are immediately exploited, and are supplemented by the construction of numerous short branch lines.* The greatest progress has recently been made in the laying of small-gauge lines, the trucks for which are taken from neighbouring mines. The improvisation of tramway tracks for horse traction by means of good timber rails may be practicable in a level country deficient in railways and trunk-roads. On the other hand, steam-power upon good artificial roads facilitates the simultaneous hauling of great weights, and columns of freight trucks, drawn by traction engines, have also their uses. A wide field is still open for the inventive brain of our engineers. The authorities on the lines of communication are all bent upon procuring means of transport of every kind. The closer the front is approached, the greater will be the necessity of lightness and mobility, the last link in the immediate rear of the army being the well-horsed supply columns.

Taking a general view of the working of the supply service considered in its main features, we shall probably see the following :—

At the rear of the army, in the interior of the country, reserve-depôts are scattered about in all the provinces, procuring the supplies for certain parts of the army. These forward their supplies by rail as required to the great general magazines, the collecting stations. As soon as one consignment has been despatched, a fresh one—for instance,

* Constructed by railway battalions.

supplies for two days—is at once packed and got ready for forwarding.

Collecting stations will generally be established at great railway-junctions,* lying, however, within our own borders at not too great a distance behind the army, and thus in perfect security.† These places must, besides, be of a nature, not to create difficulties in the extraordinary amount of traffic which is developed at such points. Towns with narrow streets, and fortresses with narrow gateways, are not suitable. Much open space is imperative, and spacious buildings are useful. Places answering this description are made the principal depôts for the armies. Not merely the supplies brought up from the reserve depôts are stored in them, but also those brought up by agents, or supplied by State manufactories. Herds of cattle also are accommodated at the collecting stations, and bakeries and workshops established. Supplies sufficient for five or six days must always be kept in store. Trains loaded with supplies packed for immediate issue stand always in readiness for departure.

From these stations the requisite supplies will be forwarded to the front, so far as the railways can be utilised beyond the frontier. Where they terminate, or where safety ends, advanced depôts,‡ to which, of course, spacious and well-situated railway stations must be assigned, are established. In these, again, supplies for two or three days will be stored, while fresh consignments are always on the way from the collecting depôts, so that an additional day's provisions may be assumed to be between these two points. From the magazines of the advanced depôts the provisions will be despatched to the front in every possible way. If the army is far distant, intermediate magazines will be organised on the lines of communication, to which the supply and wagon

* Situated, if possible, on water-ways as well.

† For the Second Army, in 1870, during the investment of Metz, the town of Neunkirchen, on the Rhein-Nahe railway, was fixed upon as a collecting-depôt.

‡ For the army of investment before Metz the station of Remilly was such a depôt.

park columns resort for the necessaries for their respective corps. They will not, however, as a rule, follow them right into their quarters or cantonments, but take up their place between the troops and the magazines, whence so many empty convoys return and as many go forward daily as are required by the troops. But they cannot be disjointed in such a manner that some may go right up to the regiments, battalions, &c., to unload. These latter must, accordingly, send their provision wagons to meet the train columns at a certain rendezvous in order to receive their supplies. Frequently a hitch occurs at this point. Movement is impeded by the proximity of the army, while the strain on transport is great. Country wagons, impressed into the service, are of doubtful value, particularly as the roads used by the columns become worn out.

The French army has a small train for each regiment, consisting of strong, well-horsed "fourgons," with two high wheels, which readily clear ditches and other obstacles, and appear to be very serviceable. Such small trains, extremely mobile and belonging directly to the regiment, together with preserved food, are the best means of making armies temporarily independent of the general supply system with its unwieldy wagon columns.

Some difficulty is always experienced in the unloading of railway trains and other conveyances. Proper warehouses for storing the supplies are often wanting in the immediate vicinity of the railway stations. Trifling as this circumstance appears to be, it is, nevertheless, very important. In 1870, great quantities of supplies were spoiled by rain all along the side of the railway from Strassburg to Frouard, and from Bingen to Metz. The necessity frequently arose for unloading the trains, merely in order to get the rails clear and to set free the rolling stock. Tents and materials for hutting are indispensable, yet it must be observed that the damp, which rises from the ground, is often quite as bad as that which falls from the sky. Waterproof sheets must therefore be provided as well. Hands are difficult to procure.

The line of communication troops are employed on sentry and escort duties, and the field army rightly hesitates to detach troops for secondary purposes. Labour is, moreover, in the highest degree disagreeable to the soldier. He feels that he is not there for that purpose, that his duty is only to fight; besides, he lacks experience. The work done by men told off by the regiment amounts, as a rule, to very little. A company of hired porters, on the other hand, organised in 1870 for the clearance of the choked and overworked railway section Nancy-Ars sur Moselle, did excellent service. Such matters also must be arranged beforehand.

The sketch here given depicts only in mere outline the supply system of a modern army. The working method is not by any means bound to follow on the lines indicated.

Loaded railway trains and fleets of barges, drawn by tugs, kept ready in the proximity of the collecting stations, form movable magazines. If a halt occurs at the front, an accumulation of supplies is bound to result, if the service from the base remains in full operation, and intermediate depôts will gradually assume the proportions of general magazines. At the front, among the troops, small detail magazines are established, from which the soldiers draw their supplies direct.

In addition to the regular means of transport, irregular transport columns are employed, raised when required and abandoned when no longer wanted. Besides what he receives from the magazines, the soldier avails himself of the resources of the country, sitting at the table of the citizen in whose house he is billeted, and investigating his cellar. All obtainable supplies are seized or bought up. When nothing appears to be left, and even force fails, money will still always procure something. When towards the end of November, 1870, the *intendantur* of the Second Army established markets in Beauce, situated north of Orleans, where troops had been continuously quartered since the beginning of October, and where nothing could be procured by requisitioning, the offer of high prices aroused the desire for

barter and sale. It was then speedily discovered that there was not a lack of provisions, but only of receptacles in which to carry them away. Sewn up in window-blinds, in beds and furniture coverings of all sorts, and in baskets and in boxes, the peasants brought in the oats sorely needed by the army, and eventually the supply became so abundant as to lower the prices.

The whole working of the commissariat of an army is characterised by great freedom of action. System is superseded by careful thought, and by the regardless utilisation of all the means at hand. This regardlessness must not only extend to the money question, but also to the pressing into the service of the army of all officials and private persons who can be of any assistance in furthering the great task. Even the best intendance department, dependent entirely upon the activity of its own subordinates, must inevitably come to grief.

If a stickler for regulations would calculate the needs of the army in the field by pounds, and provide accordingly, he would certainly rarely run the risk of part of the supplies being spoiled, but the army would suffer by this arrangement. Even the most painstaking measures do not, in the case of troops employed in the field, guarantee with complete certainty the desired result. Experience teaches us that failure occurs in one way or another. Twice and three times the normal requirements must be supplied, if an army is to be kept from want; double and treble in respect of quality, double and treble in respect of quantity. He who relies entirely upon requisitioning is lost, even in the richest of countries. He who counts upon his supplies from the rear alone will have but little success, even with the very best railway communications, a well-organised transport service, and a rich country in his rear. Everything must be pressed into the service; impressment in the enemy's country, and open purchase by authorities; buying by the troops in their own country and in the theatre of war; supply by contracts negotiated through commission agents and wholesale

merchants; utilisation of railways, canals, and trunk roads of the line of communication, transport, supply and wagon park columns, the provision carts of the troops, and rapidly laid narrow gauge lines and tramways. Stationary and movable field bakeries, the various sections of which are distributed among the troops in order to provide for them, existing bakeries, with an augmented *personnel*, new field bakeries private and joint-stock bakeries, all work together to the common end.

If the fixed determination exists to utilise all these means in war fully and unreservedly; if the preparations—which it is impossible, considering the shortness of the time, to carry out promptly after mobilisation—be made with foresight and prudence in time of peace, *then, but then only*, is it possible to be equal to the task of supplying the needs of the martial hosts of the present day, when all the generals have but the one desire to push their operations without let or hindrance.

"The power to endure privations is one of the noblest virtues in a soldier, and where it does not exist, there is no army of real warlike spirit; but such privation must be merely temporary, caused by the force of circumstances, and not the result of a miserable system, or of a parsimonious abstract calculation of mere *absolute* necessity."*

An intimate bond of union between commanders and the administrative services, and the co-operation of the general staff and the intendance department, is always indispensable, in order to render the measures adopted really beneficial to the troops. The French were lacking in this respect in 1870. The general staff made its dispositions and communicated them to the supply department, leaving it to provide for the provisioning of the troops. In spite of the high status of the officials, an intimate interchange of opinions between them and the generals was wanting. It is well if the commander-in-chief makes his plans first, without inquiring into the question of commissariat, but afterwards

* Clausewitz, "Vom Kriege," ii. 1883, 4th edition, Berlin, 1880, p. 83.

he should hold open converse with the head of the supply service, whose principle it should be to make the impossible possible. But that he will very frequently be only able to do if he is properly backed up by the staff, by the troops, and by the line of communication authorities.*

The director of supplies with an army must be in the confidence of the general. Here again everything depends on the choice of a proper person. Men who make difficulties only in order to lend importance to their position and their person are dangerous in such a place, and such individuals exert a bad influence everywhere, in peace as well as in war.† They become the ruin of the armies who have to suffer under them. This unfortunate propensity was Massenbach's chief fault, hence his great share in the catastrophe of 1806.

Experience and devotion are not sufficient qualities in the head of the supply department of an army. The post requires a man of genial nature, capable of smoothing over difficulties, but also of acquiring influence with persons of high rank. A winning, but yet firm, nature would seem to answer best.

If the arrangements made behind the army suffice for the commissariat, they will also serve for supplying the troops with ammunition, clothing and equipment; for the weight and bulk involved are as nothing when compared with the food supplies for men and horses.

It will generally be possible to make good the expenditure of ammunition by bringing up fresh supplies by rail from the principal depôts, without other intermediaries than the emptied ammunition columns of the army corps, as the experience of 1870-71 shows.‡ But prudence demands that field ammunition columns should also be formed, in order

* Vide p. 398.

† Vide p. 96 in reference to this point.

‡ There is an ordnance office at the collecting stations to supervise the despatch of fresh ammunition supplies; but the consignments arriving by rail from home are not unloaded at those stations, being sent on to the army direct.

that no hitch may occur if the railway should happen to fail. It will generally be possible to bring them to the scene of action unhorsed, as horses can be requisitioned en route or be taken from disbanded wagon park columns, and, in case of necessity, from the horse-depôts. With regard to clothing, difficulties are apt to arise in the course of protracted operations owing to want of system in the small workshops organised by units. So far we have consoled ourselves with the hope that a good uniform brought from home must last for the short space of a campaign. This, in the Franco-German war, was shown to be partially misleading. The bad state of the soldiers' clothes and boots threatened, especially in the campaign on the Loire, to become disastrous. In December 1870, some German soldiers might have been seen plodding along the miry roads, in the depth of winter, barefoot, whilst many had only wooden shoes and linen trousers. In the command of the Grand Duke of Mecklenburg, after the fatiguing marches which had been made since the middle of November, there were many weak companies in which forty men and more were absolutely bootless. "Lastly, I observe," —at that time the chief of the general staff of the Second Army reported to the great head-quarters—"that the shoes of the troops are in barely repairable condition; during a few days of rest we shall endeavour to mend matters a little. Many articles of clothing intended for the command are warehoused in various places, clothing for the 10th Corps, for instance, in Lagny,* without its having as yet been possible for us to have them brought here." When the above-mentioned corps marched, in January, through Le Mans, after its victorious battle, it was in a plight vividly reminding of the description of the troops of York before Paris. There was scarcely a soldier who was clothed in the regulation manner. Lots of civilians' garments were seen in the ranks. Everything within reach had been made use of, even the ominous French red breeches, which might easily have invited a Prussian rifle bullet. Every soldier, however,

* Before Paris.

had taken care to retain some article showing that he belonged to a regiment, if it was nothing more than the helmet, on which generally some of the fittings were wanting. This tattered condition was in notable contrast to the fine military bearing and fresh looks of the men, who were well fed. If, however, the operations had lasted much longer, the deficiency of clothing would have become a serious matter. It cannot, moreover, be denied that such a state of things must, in process of time, react unfavourably upon good order and discipline.

We have already pointed out, in another place,* the advantage of independent administration within the smaller units in time of peace. During a war, great central workshops are essential. Napoleon established them even within the area of hostilities. We now have Army Corps clothing depôts and factories in times of peace, and arrangements are therefore possible for the supply of reserve clothing on a very large scale. The industries of the enemy's country can frequently be turned to good account; as, for instance, was done in the spring of 1871 at Tours by the 10th Army Corps.

Hand-in-hand with these arrangements march those for the treatment or transport of the sick and wounded. The field hospitals only provide them with temporary shelter, then hand them over to the care of the army hospital corps, which organises permanent hospitals close in the rear of the army, and immediately follow up the advance. It is an established principle that every patient able to bear the journey shall be taken further back toward the rear, where greater quiet and security prevails. Along the lines of communication, station hospitals are built for the reception and treatment of passing sick and wounded. Hospital and medical trains move about the railways to take back to the great military hospitals at home as many as possible of those in need of medical treatment. Good arrangements of this kind, and especially the prospect of speedy succour, confirm the soldier's courage and impart confidence in the hour of peril. Suitable

* Vide p. 163.

places for convalescents who are to rejoin their units at the earliest opportunity, must also be provided. Good supervision of the sick and those temporarily absent from the ranks in rear of the army will certainly prevent large numbers being withdrawn from the front without sufficient reason.

In 1870 large horse depôts were established on the lines of communication in which many sick animals, which would otherwise have been lost, were again made serviceable.

It will readily be understood how difficult it is to exercise control in the confusion prevailing in rear of an army, and what careful an organisation is necessary. The administration imposed on parts of the enemy's country occupied, the organisation and care of magazines, hospitals, and depôts, and the establishment of safe military routes on all the lines of communication, by garrisoning a number of points along them, placing posts and detachments in other adjoining localities, as considerations of security may dictate, go hand-in-hand with the organisation and control of the whole transport, escort, and railway service. For these purposes the supreme command of the army needs a special administration, the inspecting staff on the lines of communication, under the control of which the railway adminstration is also placed. Inspecting staffs are to be found in each of the several armies, with station commandants at intervals along the lines of the different corps. Commissioners regulate the traffic on the railways. The starting-points and termini of lines exclusively given up to the service of the army demand special attention, and should be provided with strong garrisons and special facilities. The needs of the armies, and the natural conditions obtaining within the area of hostilities, must exclusively decide these matters.*

If large tracts of the enemy's country have been occupied,

* Meckel, "Taktik," p. 25, gives a very clear sketch of the probable organisation of the lines of communication and the railway service for the different armies.

governors—as was done in France by the Germans in 1870—are appointed, who unite in their persons both civil and military authority.

Of what importance fresh drafts of men are for an army is shown by the data already quoted * as to the total losses in a great army by sickness alone. Therefore the organisation of the system of drafts must not be left to be improvised in war-time, but must be worked out in detail, at all events on paper, in cases where depôt troops are not in existence. The bad method of reinforcing armies by new formations, instead of keeping existing units up to their normal strength by drafts, has long since been discarded in all great armies. Only the armies of the Northern States of America during the War of Secession, and the Turkish army in the war of 1877–78, suffered this system. These instances very clearly demonstrated the uselessness and worthlessness of unduly weakened cadres, which still retain their high-sounding titles.† The most practical course is to make them up, and only to embody the surplus into new formations.

The losses caused in the ranks of an army in the field are so excessive that the preparation of drafts must start at the very beginning of the operations and be kept up throughout the whole campaign. At all events, a certain definite percentage of loss, which must not be placed too high, must not be allowed to be exceeded without immediate reinforcement. It must furthermore be unrelentingly insisted upon that the fresh drafts reach their destination without delay. Upon the lines of communication, in the midst of a hostile and often disturbed country, the new arrivals are welcome guests, who are apt to be detained against their will, as embarrassed commanders on the lines are always disposed to regard them as good booty. An army in the field is like a never-cloying giant, always clamouring for food, and who, like Antæus, only keeps his strength so long as he is able to draw it afresh from the soil of mother earth—that is from the soil of the Fatherland. This simile has a twofold force: the

* Vide p. 398. † Vide also p. 400.

moral vigour of an army springs from the love of country; its material strength, from the self-sacrifice of the Fatherland and from unbroken connection with it.

The picture here drawn shows us how far the enhanced resources of modern times correspond to the increased demands. Armies are no longer chained to a single line, are no longer dependent upon the possession or loss of an only source of strength. They are based upon the whole country lying at their back, and, as long as the telegraph and railways connect them with it, upon the whole of their own country as well.

SECTION VI

ATTAINMENT OF THE OBJECT OF WAR.

The advent of a future war is regarded with anxious expectation. Every one seems to feel that it will be waged with a destructive force such as has hitherto never been displayed. War is now an exodus of nations, and no longer a mere conflict between armies. All moral energy will be gathered for a life and death struggle, the whole sum of the intelligence residing in either people will be employed for their mutual destruction. Great as are the armies, so must also be the destruction that follows in their wake. No doubt whatever, the wars of the future will be waged with a sternness that would appear to ancient chivalry exceedingly unpleasant. The growth of natural motives of jealousy and national enmity entails a corresponding display of force. Much as the masses, who have learnt to treasure the value of existence, may loathe war, they yet feel that under certain circumstances it cannot be avoided. The inward consciousness makes itself felt that a nation, like an individual, has to fulfil a certain mission in the time given it. The discharge of the duties of civilisation brings nations into conflict. What was it that, in 1870, in consequence of the French provocations, produced in the most peace-loving country in the world a mighty wave of martial enthusiasm? It was nothing but the feeling that the hour had at length come for the realisatiou of the dream of centuries of German unity, and that the Fatherland should, once and for all, close the period of history during which it had been the stamping

ground of foreign armies and of foreign influences. Who would have considered it possible, after July 15, 1870, that Germany could draw back from the contest forced upon it? Even the humblest members of the community had a presentiment of the mission of their nation to command the respect of the world by its might, in order to stand forth in future in the very heart of Europe as a stout rampart of peace.

Where such forces set the great machinery of war into motion, it would seem that wars can only end with the entire annihilation of one party, or the complete exhaustion of both.

As a matter of fact, the growing national sentiment and the political realisation of the principles of nationality have increased to a marvellous extent the powers of resistance of States. No Frenchman feared when we were on the Loire that we should retain the land up to that point by the law of conquest; no German ever thought of it, and complete subjugation was still less possible. The national unity of States protects them from forcible dismemberment; for the victor also understands that the partition of a conquered realm must needs be a source of continuous wars. Thus the fear of the loss of provinces is soothed to a certain extent, though it will be played on as a means of exerting pressure upon the firmness of an enemy where the elements of a State are loosely joined and are not knit together by community of race.

Frontier districts, the population of which is a mixed one, are always in danger. Their nationality is doubtful, and they can be claimed by both parties with equal right. Apprehensions go no further, and, on the whole, it has become much more difficult to force a great State to yield. A recognition of this principle was the motive power of the continued resistance of France after the loss of the Imperial armies. Gambetta, after the failure of his plans, in reply to the question of his censors as to whether he believed in the possibility of a final triumph for the defence, answered, without hesitation:

"Certainly I believe in it, even to this day. I am convinced that if the Government in Paris, which was a captive Government, had only capitulated for Paris, which was its undisputed, but also its only, right, and if it had not tied the hands of the country by acceding to the surrender of the whole of France, the country would, with the resources at its disposal, which might have been increased, and which as a matter of fact did increase day by day, have finally ridded itself of the invaders. There is no nation in Europe that has not at one time had the enemy on its soil, and has not endured his presence there for long, but has at last driven him out."

The Roman principle, never to conclude peace in times of disaster, amounted to the same, and to which that world-wide empire owed its rise.

If obstinacy and persistency were displayed equally by both sides, the end of the struggle would only be conceivable after general devastation and pauperisation had completely exhausted the physical, and long suffering the moral, forces. It is, indeed, conceivable that, in order to impose one's own will by force of arms on an obstinate people, led by a great man, it may be necessary to literally flood a country with troops and to exert extreme pressure upon the population for years on end.

But it will rarely come to this extreme measure, and in the case of prosperous civilised nations, perhaps never. A time will arrive, even before complete exhaustion is felt, when the general wish for peace will grow stronger in the vanquished State than the desire for a continuation of the struggle. This point of time will be determined by many circumstances independent of the natural qualities of the nation concerned. Pressure becomes possible soonest, and is more likely to be effective, where a numerous and prosperous middle class exists, and where industry is well advanced and commerce is flourishing, because the injury incidental to the presence of victorious hostile masses will comparatively be felt most keenly. Then it must also be considered that these classes of the population

command the means and ways of giving effective expression to their wishes. They control the Press, and by it sway public opinion, and will soon be able to put down the partisans of war, or, at all events, deprive them of their influence. An effeminate middle class makes any State weak ; for it is ever inclined, after a few disasters, to give up its cause for lost, and always yearns most intensely for the return of the calm of ordinary existence, which does not interfere with the accumulation of riches and the enjoyment of earthly goods.

Things, however, wear a different aspect where there exists in the main only a ruling aristocracy and a peasant class, the middle class being either wanting or without power and influence. The aristocracy, whether it consist of a nobility or of a coterie of moneyed persons, finds means of escaping the immediate effects of the pressure exercised by an enemy, and the injury affecting but a fraction of their collective resources, is not sensibly felt. The peasantry, again, which suffers most from the presence of hostile forces, has not the means of enforcing its wishes for the termination of the war. Hence it follows that, unless the powerful influence of some lofty character counteracts the natural tendency, pressure can more readily be exerted upon countries like France, Germany, Italy and Austria, than upon, say, Russia. It is incontestable that the simple duration of a state of war affects one State more than another, and that will, of course, have great influence upon its firmness.

The form of government is also of importance. The head of an absolute monarchy will be able to arouse the highest degree of warlike energy. But, in his case, the feeling of personal responsibility will assert itself the more keenly the less he is liable to be influenced by others. Everything then depends upon the strength of his character to enable him to bear cheerfully the burthen of high responsibility. A parliament may be the centre of either agitation for peace or of fanning the fury of war, since its attitude depends upon what group is in power. A handful of determined fanatics divested of personal responsibility, on the plea that they are merely

carrying out the will of the people, may protract a hopeless war, which an absolute sovereign would long since have ended. The latter will act in accordance with the wishes of his subjects rather than would a small coterie of political partisans. The position of a dictator called to the head of affairs in the hour of danger is most favourable to the evolution of war-like energy. His powers are those of an absolute sovereign, and the responsibility falls upon those who have called him, or who have acquiesced in his usurpation of the supreme power.

There are many other circumstances which affect the endurance of the fighting temper : the situation of the moment, the spirit of the people, historical traditions and experiences, confidence in leaders, faith or mistrust in existing institutions, the shipwreck of hopes which were regarded as certain. The manner in which the victor makes his power felt either paralyses or encourages resistance. The more unexpected a blow of fate falls, the more powerful are its effects wont to be. The news of the rout of the army at Jena and Auerstädt stunned Prussia in 1806 so completely, because before the war began the bare possibility of such a catastrophe had never been contemplated.

It will therefore not be necessary, as a rule, to proceed to the total conquest of the enemy's territory. Frederick the Great was right when, in 1757, he expected the end of the campaign from the complete defeat of the Austrian army in Bohemia, and when he compared the expected battle in anticipation with that of Pharsalus. "By such a defeat at Prague Austria's power of resistance would not, of course have been really and finally broken," Theodore von Bernhardt remarked *apropos* of that occasion ; "but neither the then existing condition of things in the world generally nor the spirit of the age, nor, particularly, the constitution of Austria, nor the kind of interest which the peoples of this Empire, or really only the influential classes, took in the object for which this war was waged, gave room for the supposition that the enemies of Prussia would display extreme heroic firmness.

King Frederick had a truer appreciation of the moral factors of success than his contemporaries, and understood to exploit them quite as well as Napoleon; he also knew quite as well 'ce que c'est que la terreur' — and he might expect, with equal right as Napoleon at Austerlitz, that the stunning, disheartening blow would bring about peace."

In the grandeur of its conception this campaign of the King, accordingly, equalled all those of modern times which aimed at a complete annihilation of the enemy.

That *annihilation* has now a quite different meaning to that obtaining in Napoleonic times, lies in the altered condition of nations, especially in the fact that a national sentiment has now been aroused, which makes a people *one and indivisible*.

The first thing to be done towards the attainment of the object of the war is to deprive the enemy of any well-founded hope of victory by the destruction of his armies in the field. Thereby an important advantage has already been gained, which itself may be sufficient to wrest the desired peace from a weakly nation. The next step is to rob one's adversary of any faith in the possible return of the fickle fortune of war. This is done most effectually by the capture of the capital, the occupation of places or districts which are most likely to supply the means of organising fresh forces, and the capture of great strongholds designed to stop or impede the advance of invading armies. Politics may, at this stage, become a powerful auxiliary by depriving the vanquished of all prospect of outside assistance. There remains the last means, namely, heavy pressure upon the most prosperous and sensitive districts, or the occupation of the whole country and the cutting off of its communications with the outside world. This is the *ultima ratio* of war.

It is but right to try to form an idea of the vast energy which will be brought to bear in war, in order to enable us to measure our own prospects, and to take steps accordingly. Yet the result of this investigation must never permit us to proceed against a powerful State with only a *part* of our forces. It is never possible to foresee by what chance inci-

dents, by what personal influences or political revulsions the stubbornness of an enemy may not be increased beyond expectation. It was the chief error of the Allies in the first War of Coalition, that they allowed themselves to be deceived in this particular. Even when we confidently believe it possible to attain our object without extreme efforts, still our ends will always be gained most surely, most quickly, and most completely by the employment of all our forces. The presence of troops on the battlefield, which may not, after all, be needed to complete the victory, will always serve to heighten the moral impression of superiority. A fault in the opposite direction, a too scanty calculation of forces, may be the very means of strengthening the enemy's originally doubtful resolution, and thus protract the war.

Thus in the future, where the enemy fairly deserves to be regarded on equal terms, we shall do well under all circumstances to make our preparations with the view to the possibility of having to proceed to extremities.

SECTION VII

CONCLUSION.

So long as earthly nations strive after earthly goods, so long as they aim at securing for succeeding generations both room for expansion and peace and respect among their neighbours, so long as, led on by great spirits, they strive to go beyond the narrow bounds of everyday needs towards the realisation of political and civilising ideals, so long will there be war. What use is it to dispute whether war has an ennobling or degrading effect upon mankind? The frequently quoted simile, that war is like a thunderstorm, which clears the air under great convulsions, must certainly not be applied without reserve. The Thirty Years' War changed Germany into a wilderness, and brought in its train a demoralisation without parallel; and our own experiences in the Fatherland scarcely tend to foster the belief in the purifying effects of the last war. On the other hand, we rightly call the time when Prussia, after having fallen so low, rose and took up arms for its liberation, the time of her greatest glory. The preceding disaster had, in truth, dissipated, like a thunderstorm, the stifling atmosphere oppressing the life of the nation. A fresh invigorating breeze blew over the land.

The moral effects of wars will differ according to the form which they take, according to their final issue, and according to the times in which they fall. We must accept what the gods send. What is, however, absolutely certain, is that *wars are the fate of mankind, the inevitable destiny of nations; and that eternal peace is not the lot of mortals in this world.*

To-day, then, it is not sufficient, as Machiavelli proposes, that rulers alone should know war, the nations themselves do no less need this knowledge. They should know to forge them weapons, to cultivate strength to wield them, and to steel their hearts so as to be prepared to endure the trials imposed by a struggle for the Fatherland.

It is not difficult to learn to *understand* the nature of war. "The conduct of war in itself is very difficult, of that there is no doubt; but the difficulty does not lie alone in the fact that special talent or great genius is demanded in order to grasp the true principles of war; any man of average intelligence, not utterly ignorant of the subject, is quite capable of grasping these. Even the application of these principles on map and paper gives no difficulty, and to have sketched out a good plan of operation is no great masterpiece; the whole difficulty consists *in remaining faithful in execution to the principles one has proposed to himself*."

So Clausewitz teaches us.

The sober application of simple factors, of which these pages have endeavoured to give us a sketch, a knowledge of the moral levers and of human nature, and the capacity of formulating a rational purpose, constitute all the knowledge required. Want of experience may, to a limited extent, be made good by an attentive study of former campaigns.

If, nevertheless, the gulf between "knowing" and "doing" is still a great one, this is purely due to the fact that the machine—the army—needs a vigorous hand to make it respond promptly to the pressure applied, and that, moreover, the execution of all plans takes place under the continuous counteracting influence of the enemy and amidst the impression of constant danger. Clausewitz compares the whole art of war "to the working of a compound machine with such enormous friction, that what can be projected on paper with ease, can only be carried into execution by a great effort"

The movement of masses is like the slow tread of an ox drawing the plough. It appears to be so easy to keep him

going straight, and it is so for the practised hand. But let a novice take the handles, and what looked but a dragging pace seems to gather the speed of a storm. In spite of the highest exact knowledge, and the clearness of the object in view, the intended straight line makes the most startling bends and curves.

Personal friction, unfortunate occurrences, misunderstandings and errors, added to the excitement of the battle, the feeling of always standing face to face with events which may bring the height of good fortune or spell unutterable disaster—these are the factors in war which apply the crucial test of character, and which can only be appreciated by one who has learnt to know them.

Many a gifted man who, with the boldest hopes, and equipped with the necessary knowledge, has essayed the *rôle* of a general, has retired from the lists after strenuous efforts, broken by such obstacles, and with despair in his soul.

When one has mastered the elements of the art of war, and has digested the principles of the most famous commanders with the aid of a tried expositor, the desire arises involuntarily in one's heart to try one's own ability and to appropriate to oneself the place of a Bonaparte at Marengo, or of a Frederick at Rossbach, Leuthen, and Liegnitz. But if one's eyes be cast back upon the instances of unfortunate commanders who, with equal right, coveted the same, attained their hearts' desire, and came to grief, only to be branded by their contemporaries as criminals and by posterity as weaklings, a man who is really in earnest recoils for a moment.

The question then arises: Is a knowledge of war valuable to the ordinary mortal, when it may only tempt him to dare difficulties and dangers, perhaps to his own undoing? Certainly!

What true soldierly nature would hesitate long to brush aside all scruples, and seize the opportunity, when offered, of wielding the bâton of a field-marshal? The prize is a great one; it is that which beckons the poet and the artist

onward on a thorny path—Immortality. This word has an irresistible charm. The fortunate warrior rescues his name from oblivion. The names of Frederick and Napoleon will ring as long as the world lasts.

"But is it worth while to impose such heavy trials upon the masses, in order that a single man may be immortalised? The thousands that have fallen for the glory of the great commander are not mentioned. They go without reward." This may be the opinion of short-sighted wisdom, but we regard things in a different light. Even the greatest captain needs many capable, faithful, and bold assistants, and *these share in his glory.*

If the graves could open, and a Macedonian who marched with Alexander through the Granicus were to-day to come before us, even if it were only a simple warrior, we should imagine Alexander himself standing before us. Would not a Carthaginian soldier, who crossed the Alps in Hannibal's army, appear as an embodiment of the great enemy of the Romans himself? Posterity will yield in its mind the simplest warrior an immediate share in the greatness of the commander. All distinctions of rank disappear, and the reverence inspired by great deeds extends to all who shared in them, though they be of the humblest rank. Would we not gaze with respect and admiration upon a Grenadier of Leuthen, were he to rise out of the earth, and forget that he was only a soldier like many others of his time, and of whom there are many in our days? A happy destiny allowed him to play a part in a great historical deed, and this ennobles him in our eyes; we do not inquire into his personal merits. In this manner, future generations will one day envy the men who went to war with King William against Austria and against France, and laid the foundations of German unity. The fact that even the unknown and unnamed soldier, who would otherwise only live in order to live, to labour in order to earn meat and drink, shares in war the fate of great heroes, of rare geniuses, and is a helper in their great work, is sufficient reward. Even the crudest of

men will not lack something of the feeling that here he raises himself above the toils of everyday existence. *Whoever has a heart, feels it beat higher and becomes enthusiastic for the profession of a soldier.* To defend the Fatherland, means also to gain the gratitude of the Fatherland, to unite one's name and one's being with the name and fame of one's King, one's leader, and one's people.

Empires built up and made great by the sword last, it is true, but their time, like everything else that ever has been or ever will be in this world. "The destiny of nations is like that of men; nations rise, they grow, they bloom, they decay, and cease to be." But it is worth more to make good use of one's allotted time than to outlive it like withered flowers in the spring. As yet no historian has ever placed the Chinese higher than the Greeks and the Romans, simply because they have outlived the latter. The consciousness of working for transitory greatness cannot affect the pleasure of the work. If only the name lives on, and if what a nation has done for the development of the human race was great, it may well one day dissolve into other forms; it has lived enough. To have shared in its achievements is sufficient to ensure a lasting record in history.

We Germans to-day are in a happy position. The star of the young Empire has only just risen on the horizon; its full course lies still before it. The upward course to the zenith is more pleasant than that down the incline. And if ever a rising State held a guarantee of long existence, it is a strong, united, and military Germany in the midst of the Great Powers of Europe. Such a position is rightly called perilous, but it is the consciousness of danger which keeps energy alive. Certainly, if our Fatherland was to rest upon laurels won, and surrender itself to the pleasant dream that its existence, its prestige, and its security had been gained once for all, and that its neighbours were not, after all, ill-disposed, it would perforce soon become their prize. Accessible to all, in the way of all who hanker after expansion, its frontier districts, inhabited by people who, either from tradition, or from rest-

lessness and love of change, conceive their centre of gravity to lie beyond, nowhere barred by natural obstructions, it would have to bear the cost of every revulsion in our part of the world. But so far as human foresight can conceive and provide, it will not come to this. A strong arm and a sharp sword will protect the heart of Europe.

But we must ever bear in mind that we have yet to climb the height. Ever upward is our watchword. Unceasing effort to perfect our national military system will, for a long time to come, be our highest political wisdom. Hand in hand with it must go the *increase* of our moral forces, which decide everything in war; *increase*, not mere conservation; for "never are moral forces at rest; they decline as soon as they cease to mount upwards." *

First of all, then, it is necessary to make it clear to ourselves and to the children growing up about us, and whom we have to train, that a time of rest has not yet come, that the prediction of a final struggle for the existence and greatness of Germany is not a mere fancy of ambitious fools, but that it will come one day, inevitably, with full fury, and with the seriousness which every struggle deciding the fate of a nation entails ere a new political system receives unreserved recognition. Bearing this constantly in mind, we must work incessantly, by example, by word, and by our writings towards this end, that loyalty towards the Emperor, passionate love for the Fatherland, determination not to shrink from hard trials, self-denial, and cheerful sacrifice may wax ever stronger in our hearts and in those of our children. Then will the German army, which must be, and shall ever remain, the German nation in arms, enter upon the coming conflict with full assurance of ultimate victory.

* Scharnhorst in 1806.

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